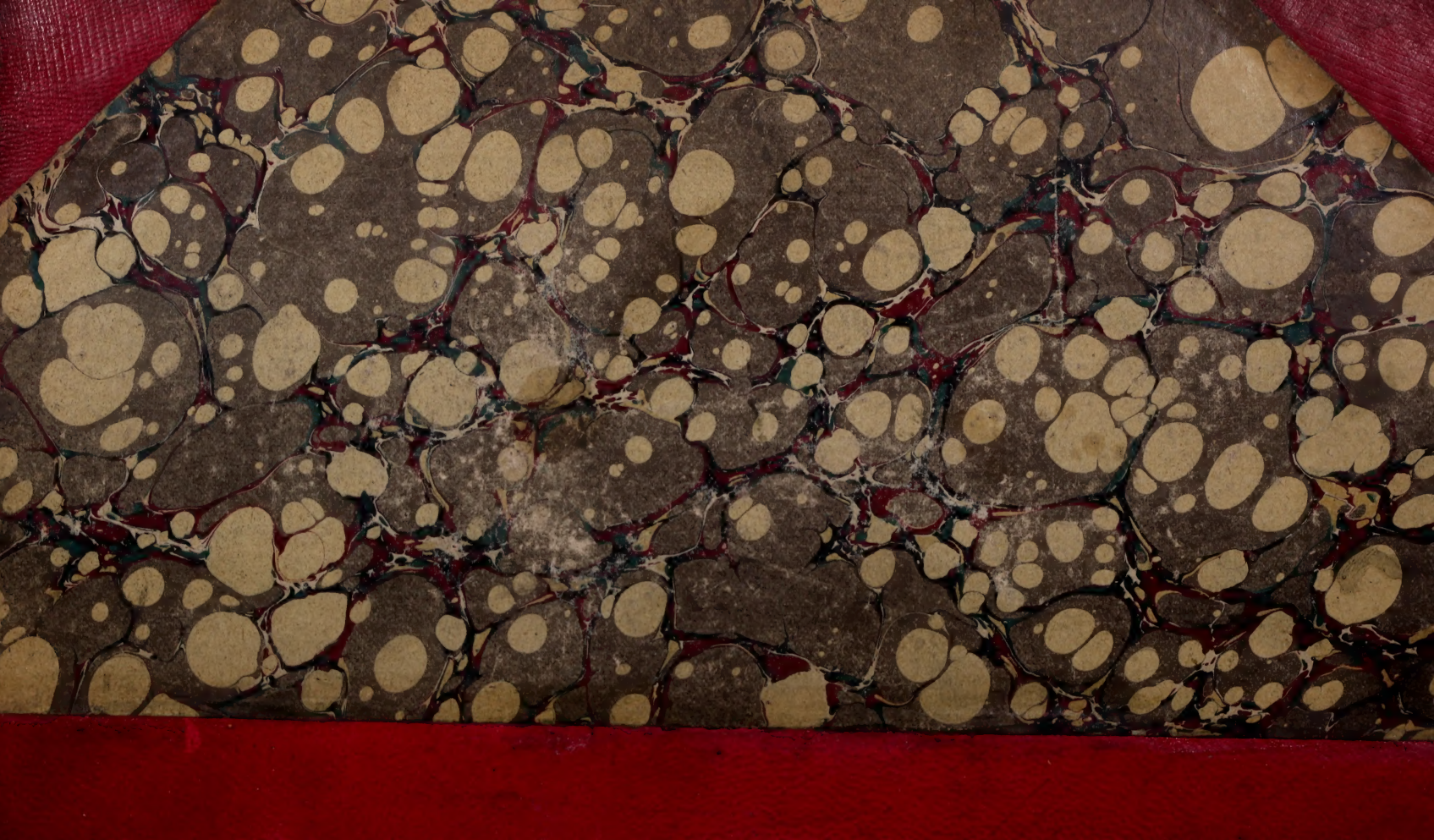

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THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery & Collateral Sciences.

EDITORS:

J. ADAMS ALLEN, M. D., LL. D.
WALTER HAY, M. D.

VOL. XXVII.

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VOL. XXVII.—JANUARY, 1870.—No. 1.

Original Communications.

ARTICLE I.—*A Brief Review of the Natural Supports of the Uterus, with Certain Inferences therefrom.* By H. WEBSTER JONES, M.D., Accoucheur to Cook County Hospital, and Clinical Lecturer upon the Diseases of Women.

IT is proposed in the present paper, to review, very briefly, the supports of the uterus, with the hope of securing more definite ideas of nature's purposes concerning that organ. It is believed that the hints deduced from such an inquiry may not be unavailable to the student and practitioner.

First, the *ligamenta lata* interest in respect to their *breadth*; their *origin*, oblique as compared with the axis of the body, but parallel with that of the superior pelvic strait, and finally, their *office* as blood and nerve conveyers to and from the uterus and its appendages.

By a *breadth* as great as the uterine length they, in health, insist upon a parallelism between that viscus and their own origin.

Their obliquity, therefore, determines the direction of the uterine axis, while their central origin preserves its body from an

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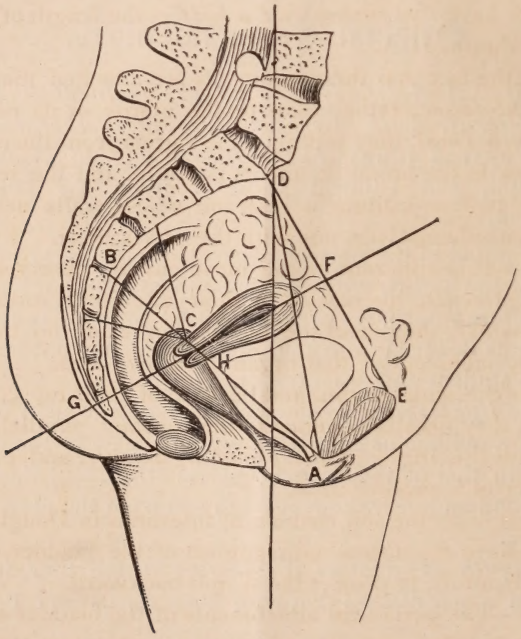
infringement, on the one hand, upon the bladder, and on the other, upon the *cul-de-sac*, whose intestinal contents should form one of its strongest safeguards.

The *office* of these ligaments, when retroversion of the uterus has occurred, is interfered with, much as if their vessels and nerves had been subjected to "torsion" by the forceps of the surgeon.

Second — The *cervico-sacral* ligaments are of great importance, as conservators of the uterine balance.

These are notable in respect to their *line of tension*, their *normal length*, and finally, their *attachment*, which is less to the uterus itself than to the *vaginal cul-de-sac.*

Applying the law of the "composition of forces" to these ligaments, they are found to form, together with the upper vaginal wall, a *chord*, whose arc is composed of the sacral curve (below the third bone), the coccyx and perineal muscles, ending in the sub-pubic ligament.*



* The above Diagram is based, geometrically, upon the researches of Professor Hodge, who seems to have devoted much time and pains to the attainment of exact ideas, in regard to the relative distance and place of the pelvic structures and organs.

A line A C B represents the chord mentioned, and A G B is its arc. The former will be found very nearly coincident with the superior vaginal wall, A H, its line of cervical attachment, H C, and the line C B, representing the direction of the composite cervico-sacral force.

The *normal length* of these supports must evidently conform to the distance of the sacrum from the intersecting transverse plane of the pelvis, in which the *broad ligaments* lie, less half the thickness of the *cervix uteri*. The line B C indicates this distance.

In a standard pelvis, Professor Hodge gives the diameter A C B as four inches and eight lines. Professor Meigs (Diseases of Woman, p. 208) says that the distance of the cervix from the sacrum ought to be from *one* to *one and a half inches*, and that the vaginal length (measured upon the line A C) should be *three inches and a half*. Allowing one inch as the thickness of the cervix, we have *two inches and a half* as the length of the upper vaginal column, H A.

Again, the fact that these ligaments are attached mainly to the vaginal *cul-de-sac*, rather than to the uterus or its neck, shows that *when normal*, they separate the vagina from the cervix, posteriorly, as do the broad ligaments laterally, and the rectum inferiorly, so as to constitute a reservoir whose walls neither lie in contact with themselves, nor with the cervix uteri.

Third — It is apparent to the most cursory observer, that the *round ligaments*, by reason of their circuitous route and the angle at which they meet the uterus, can exert no influence in preventing a descent of that organ in its own axis.

But, for the same reason, and because of their muscularity and elasticity, they greatly conduce to the constant parallelism of the uterus with the origin of the *broad ligaments*, and prevent the occurrence of a *retroversion*.

Together with the soft cushion of intestines in Douglas' *cul-de-sac*, they form the normal antagonism of the bladder, in its tendency, when full, to project the womb backward.

Fourth—The peritoneal attachments of the bladder and uterus, by some termed the *utero-vesical ligaments*, serve to make the movements of these organs, to a large extent, mutual, and explain some of the sympathies which exist between them.

Fifth — The *vagina* and *perineal muscles* are important adjuvants to the uterine balance.

The former is such simply and *only* because it forms part of the chord A H C B.

By the elasticity of its upper wall, it preserves a due extension of the *cervico-sacral ligaments* and the cervix, at a proper distance from the arc A G B. The distance F G (or the pelvic *depth*) is stated by Professor Hodge, as four inches and six lines, and he gives the length of the uterus as two inches and a half.

Allowing six lines for the distance between the plane of the superior strait and the *fundus uteri*, we then have, approximately, one inch and a half as the elevation of the *os uteri* above the arc mentioned.

Given the pelvic diameters as stated, and the uterine and vaginal dimensions, as indicated by the above well-known authorities, and it is impossible for the vagina to meet the uterus otherwise than at an *acute angle;* it cannot, then, form a "columnar pedestal," upon which the latter may rest.

The *levator ani* muscle, in transit from its anterior origins, embraces the vagina obliquely, just behind its proper sphincter.

By a few muscular fibres sent off to the upper wall of that canal, it assists in maintaining proper tension; and, by similar union with the lower wall, it conduces to the apposition of the two.

The perineal muscles cannot act *directly* upon the womb, unless that organ has *lapsed* a full inch and a half, or lies *retroverted* upon the rectum.

They form a *corps de reserve*, useful indeed, in all violent depressions of the abdominal and pelvic contents from external force.

The pelvic fascia and interstitial cellular tissue contribute to the general strength and safety of the supports enumerated.

The following reflections are incident upon this view of the subject:

1st. The uterus is intended to observe certain relationships to other organs; in fact, to possess a *normal position*, having variations which are limited in extent.

2nd. The uterus, like other bodies whose main support is below their centre of gravity, is liable to divergence from its normal position.

3rd. Anatomically, it is least protected from an *anteversion* (or flexion), for the uterine axis is obliquely forward, as regards the force of gravity, and it sustains, upon its posterior and upper wall, some of the weight of the intestines. Moreover, there are no *fundo-sacral* ligaments; and the bladder, generally empty, or nearly so, is the sole antagonist of the round ligaments.

Among one hundred and fourteen women examined, by M. Panas (*vide* "L'Union Medicale"), one-third were subjects of these errors in place; and they were mainly young, unmarried or non-parturient, and therefore, less liable to accident.

Inferentially, this diversion should be attended by less physical annoyance than its opposite state. Torsion of the *broad ligaments* can here only reach over an arc of 35°, and is not necessarily obstructive.

4th. In her defences against *retroversion*, nature has spared no pains. The round ligaments above and in front, and the cervico-sacral below and behind, not to speak of the obliquity of the broad ligaments and the intestinal compress in Douglas' *cul-de-sac*, all fortify the uterus most evidently, in this direction. The cervix kept within an inch and a half of the sacrum, and the round ligaments preserving a fundo-pubic distance of two inches and a half, no retroversion *can* occur. (Meigs, Woman and Her Diseases, p. 208.)

Inferentially, this displacement is far more serious in its results than any other. Torsion of the broad ligaments may here extend over an arc of 160°, obstructing the venous channels, giving rise to congestions, ovarian and uterine, and by impeded or distorted reflex action, originating hypertrophies, hyperæsthesias, and disurbances of the menstrual function.

Such is the success of fashion, as arrayed against nature, that "seventy-five per centum of uterine disorders and displacements consist in retroversion of the womb," (*loc. cit.*)

5th. The uterus can descend in its own axis, (*i. e.*, "*lapse*") but *one inch and a half.*

It can be moved forward, its obliquity being preserved ("*prolapse*") not more than two inches and a half.*

* The writer considers that any divergence of the upper uterine axis backward, so far as, or beyond a parallelism with the vertical axis of the body, derivatively speaking, a "*retroversion.*"

6th. Inferentially, the *os uteri* was not intended to impinge upon the pelvic floor.

Still less should it rest upon foreign bodies of greater firmness and resistance.

7th. The vagina is intended as a *reservoir*.

Retroversion and prolapse rob it of its receptive and retentive powers, and diminish the probability of conception.

Anteversion has less of this tendency.

8th. The fact that the *cervix uteri* "falls easily" into the mouth of a speculum, is corroborative of a tendency to retroversion, the normal angle of incidence of uterus upon vagina being about 70° — an *acute* angle.

9th. No pessary should fix the womb *immovably*, or elevate the *os uteri* more than one inch and a half (to two inches?) above the perineal structures, or force the *cervix* backward more than two inches and a half from the pubis. The point C (*vide* diagram) may be thus held at a distance of three and a half inches.

Any abdominal compress, however constructed or applied, forces the intestines in the direction where there is least resistance; will inevitably and in time overcome the elasticity and tone of the uterine supports, muscular or ligamentous, causing *lapse* and *prolapse*, and when a degree of *retroversion* exists, will certainly increase its extent, and hasten the evils which attend thereupon.

Finally, artificial supports for the uterus should always harmonize with Nature's provision for the safety of tissues, the propagation of the species, and the comfort, bodily and mental, of the patient wearer.

ARTICLE II. — *On Life, from a Physical Basis; and some Qualities or Phenomena, which are thought to be Peculiar to Life, and Irreconcilable with Physics.* By Z. C. MCELROY, M.D., Zanesville, Ohio, President Muskingum County Medical Society.

THE qualities possessed and phenomena developed by human beings and other organized bodies, and the qualities and phenomena of inorganic matter on their surfaces, present few points of resemblance. Observers, from the remotest antiquity, have

all, or mainly all, united in attributing certain phenomena to an unknown force, or something, which they designated as "vitality," "vital force," or "vital principle," or "life." Its existence was inferred from the phenomena of life, and the qualities and phenomena possessed by living beings were admitted to demonstrate its existence.

Doubters may, perhaps, have existed, from time to time, of this philosophy; but, if so, they failed to make any impress on current science or thought, until a very recent period. But they do exist now, and though their numbers may be few, they will not likely ever be any less.

In this iconoclastic movement, the Muskingum County (Ohio) Medical Society is entitled to whatever merit may hereafter attach to the initiative, or the dishonor attached to failure, in endeavoring to bring the phenomena of organic life, in health and disease, squarely within the pale of physical or exact science, and the dethronement of the imaginary idol of "vitality," as a superterrestrial force, which has so long swayed the minds of scientific investigators of the material and forces of organic life.

But its membership is, by no means, a unity in the matter; while all admit, perhaps, that some of the phenomena of organic life may be due to the operation of the ordinary physical forces of nature, there are others who think that living beings possess some qualities, which, in themselves, are peculiar, and irreconcilable with any ideal of life from an exclusively physical basis. Thus, at a recent meeting, one of its members read an elaborate, carefully-studied, able and dignified paper, opposed to a physical basis of life, and summing up the following qualities as points for which physical science offered no explanations:*

"But, allow me to mention some qualities which are peculiar to life, viz.:

1st. Activity: contra distinguished from simple motion, and this presenting often as opposed to the "physical forces."

2nd. Individuality; which causes even like particles of matter to present different features.

3rd. Reproduction; or perpetuation of individuality.

4th. Immutability; or the maintenance of "life," notwith-

* Copy furnished me by the author.

standing all the molecular changes which take place in an organic body.

5th. Sensation; or the appreciation of bodily states and wants.

6th. The quality of Perception.

7th. The quality of Instinct; and, in man,

8th. The faculty of Reason;

9th. The faculty of Consciousness;

10th. The Will, and mental and moral phenomena in general."

These are strong points, well and wisely chosen, and if they cannot be reduced to simple physical elements, and shown to have their manifestations due to the operations of ordinary chemical and physical law, the attempt to construct a physical basis of life has been undertaken without sufficient knowledge, and must be considered a failure. It will, therefore, be needful to analyze each of these ten qualities separately, and ascertain whether they can be reduced to simpler elements than appear on their surfaces.

1st. Activity, and "as contradistinguished from simple motion." Activity, if it has any meaning at all, is rather a quality of motion than anything distinct from motion. It is, in fact, motion — nothing more, nothing less — if it represents any thing else than a quality of motion; and, in organic life, is certainly due to correlations of the ordinary physical forces of light, heat, electricity, etc., etc. It seems to me quite unscientific to invent causes, when those already in actual existence are at hand to account for any or all of the qualities or phenomena of "life." The simplest element therefore of activity is motion.

3rd. Individuality. That is, separate and distinct existence. The wheaten loaf is certainly the formless protoplasm of all animal tissues; that is, man and beast, bird and worm, fish or insect — the most diversified distinct existences — may eat from the same wheaten loaf, and at will make their tissues; that is, their separate existences. Hence, their individuality must consist in something else than matter, for the same first matter of life enters into them all; and the simplest element, therefore, of individuality must be in form, or forms. Thus, the difference between bone and brain matter is certainly very striking, yet that difference is due to form, and not to the material of which each is composed; for, in different proportions, probably, their ultimate

elements are the same. Nor is the resemblance between the human infant, deriving its whole sustenance from its mother's milk, and the mother's milk, any nearer; yet the tissues of the infant have certainly been constructed from its mother's milk; and the difference between them is principally in their forms. Again, the material of the pen which traces the manuscript from which this article is printed, existed, possibly, at one time, in combination with quartz rock in California. It was gold then, and is gold still. After passing through many metamorphoses, it has become a pen, and the feature which distinguishes it from the gold from which it was made, is its form. The simplest element, therefore, of individuality is form.

4th. Reproduction. In organic life, no one expects, because such things have never happened to any one's knowledge, that in the act of reproduction, an elephant should give birth to a chicken, for example, or to perpetuate any other than its own general forms. Hence, reproduction, stated in its simplest terms, consists in form and motion.

5th. Immutability. Maintenance of form with incessant, or, perhaps, frequent molecular changes. The simplest statement of immutability, as applied to the maintenance of life or form, is form; and is due to the operations of what the writer has designated as the "form force" of organic life.* But the records of morbid anatomy unhappily show that organic forms fall short of immutability; for if the forms of organic life were really and truly immutable (in the ordinary meaning of the word); that is, always maintaining "life" or "forms," organized bodies would be immutable, and, in addition, possess another quality, to-wit: immortality. These would be, because there could be neither disease, old age, or death; for these are due, taking the testimony of pathology and morbid anatomy to (in their phraseology) changes of structure, which is, again, simply changes of form. For if the forms of organic life were always maintained intact, the vocation of the physician would as certainly cease as the vocation of Demetrius† ceased with the worship of Diana. The simplest element of immutability, as here used, is form.

* "Western Journal of Medicine," September, 1869.

† Acts of the Apostles, xix. 27.

5th. Sensation. That is, sight, hearing, touch, taste, smell, hunger, thirst, ease, pain, etc., etc. For the appreciation of these, or any other bodily states or wants, taking the testimony, again, of anatomy and pathology, a nerve or brain-like mass or patch is necessary, as well as nerve-chords and motion, in their molecular structure or particles. It, therefore, only requires the bare statement, to prove that these states and wants are all reducible to form and motion; for a change of form in the eye, for instance, if to any considerable extent, involves the loss of vision. And this is equally true of all the other organs of sensation. The simplest elements of sensation are, therefore, form and motion.

6th. Perception. That is, knowledge through the medium, or instrumentality of bodily organs. Bodily organs must have form, and motion must occur in their molecular structure, or perception cannot take place. Perception, then, is reducible to form and motion; a cessation of motion is death, and surely dead organic bodies do not perceive.

7th. Instinct. That is, a certain power, independent of all instruction or experience, by which animals are directed to do, spontaneously, without having any end in view, whatever is necessary for the preservation of the individual, or the continuation of its kind. Instinct depends, as demonstrated by both anatomy and pathology, on patches or masses of brain-like matter, and is to be regarded, if regarded on its facts, as any other organic function. Living things are said to be born with instinct; which is true — just as true as that they are born with vision, hearing or digestive apparatus. No human infant has to be taught to see, or hear, or digest proper food. These are the conditions of its life. No living being exhibits what is called instinct, except it has a mass or patch of brain-like matter, which evolves what is called instinct, just as the liver evolves bile; and no one, to my knowledge, has ever thought it necessary to open schools for the purpose of teaching livers to secrete* bile. Instinct, then, is the evolution of masses or patches of brain-like matter, which depend, for the performance of their functions, on form and motion, just as the eye or ear, or liver, or kidneys, or lungs.

* The word "*secrete*" is used, not because it is believed to be properly applied to any organic function. Indeed, it is a most mischievous word in physiology, for the reason that the mental impression produced by the word does not correspond with the facts of life.

Instinct differs from intellection, in that intellection depends, so to speak, on added brain matter, or by culture or education giving the forms to brain-matter from which intellection springs. Hence the necessity of teaching intellection to the young, while brain matter can be given the requisite form, or added; for if delayed till after adult life, these forms are produced with much greater difficulty, as all experience proves, and not unfrequently it is impossible. The proverb that "instruction is for the young," has its foundation in physiological truth. Possibly this fact may account for the difficulty my friend finds in understanding life from a physical basis, instead of a metaphysical, as we were both taught when medical pupils, and probably before.

Instinct, then, is clearly reducible to form and motion.

8th. Reason. That is, to reduce inferences justly from premises. To reason justly, is to infer from propositions which are known, admitted, or evident, the conclusions which are natural, or which necessarily result from them.

Reason is one of the faculties of the intellect, and as reason depends on brain matter, having a definite and peculiar form, and can only be manifested by motion in its molecular structure, this, like all the preceding, is reducible to the two simple physical elements of form and motion.

9th. Consciousness. That is, the knowledge of sensation and mental operations, or what passes in one's own mind. This, like the last, depends on brain matter; that is, form, manifested, like reason, by motion in its molecular structure. It is, therefore, also, merged into the two simple physical elements of form and motion.

10th. The Will, and mental and moral phenomena in general. That is, the faculty of mind by which we determine to do or forbear an action. The will, like consciousness, depends on brain matter, having a definite and peculiar form, and can only be brought within our comprehension by motion in its molecular structure or particles: is one of the intellectual faculties, and as intellect depends on added brain matter, or by culture and education giving the requisite form to brain matter, this, too, like all the preceding, is reducible to the two physical elements of form and motion.

It is seen, therefore, that all the phenomena of organic life, like

all the phenomena observed in inorganic matter, are reducible to the two simple physical conditions of form and motion. And however else they may be viewed, metaphysically, must, nevertheless, be studied on their facts alone, by the physical philosopher. The physical conditions for their manifestation are form and motion, and these properties are all that concerns the pathologist and therapeutist. By remedial agents, our power over forms in organic life is *nil;* but over motion, considerable. The management of lost types or forms falls within the province of the surgeon, whose sole power lies in their destruction, when their destruction does not involve life. The surgeon cannot, for example, remove, that is, destroy, an enlarged heart; that is, a heart that has lost its normal form, with any expectation that the patient would survive, even when closing the necessary wounds in the integuments, no matter how expeditious he went about it. But the physician may, by many agents and expedients, prolong life, by complying with the inexorable laws governing lost forms, and, consequently, imperfectly performed function.

The structural unit of animal organic life, is a sac or cell, containing a fluid and a granule. Or the granule or crystal, that is form, may be so regarded. It is a further fact, that the germ is also a sac or cell, containing a fluid and a granule. It may be regarded, therefore, as tolerably certain that the form force is, in some way, identified with the granule or crystal. It may be further regarded as tolerably certain that the material of the germs, for the most diversified forms of life, have, to a great extent, an identity; *i. e.*, that they are composed of the same ordinary inorganic matter, and the physical forces are indispenssable for their evolution. A human being is thus complex: 1st. Inorganic matter; 2nd. Physical forces; 3rd. Form force; 4th. Spirit or life.

It is quite probable, and indeed is the present tendency of science, to refer all organic forms to some mode or correlation of the physical forces, operating as one great law or force. The human or living being would then be a triple compound of matter, physical force, and spirit.

But the simplest elements of all animal life, or, for that matter, all organic life, are form and motion; and these forms and motions can only be made manifest to our senses through material

common, in all probability, to the universe; for recent scientific investigations have demonstrated the identity of some of the solar and planetary with the inorganic matter of the earth. And it is quite certain that the source of all power is the sun. So that all that is super-terrestrial in the human body is spirit, or, if it is preferred, say "life." But all that we can influence by therapeutic, remedial, or hygienic agencies, are its strictly terrestrial portions. The only way, therefore, in which it can be intelligently studied, for therapeutic and pathological purposes, is from a physical basis; and for the additional reason that when so studied, the facts of health and disease are correctly represented in the mental impressions so obtained.

Diverse, complicated and mysterious as appear the ten specifications of "qualities" peculiar to "life," enumerated by my friend, the analysis of the physical philosopher reduces them all to the same simple, understandable, physical phenomena of form and motion.

Each of the ten several qualities unquestionably depend, for their manifestation, on matter with certain forms, or, in other technology, certainly less definite, structure and motion; and motion as a correlation of the ordinary physical forces of inorganic nature.

Even while writing this short memoir, the *London Lancet* reaches me, with an article on "Granular Degeneration of Nerve Cells in Insanity," by the superintendent of a royal lunatic infirmary in Great Britain; and his facts are not guessed at, but obtained among the dismal yet instructive revelations of the dead-house. He says:

1st. He finds the "grey matter degenerated into fat" — that is, loss of form — "not only where acute mania was present, but in chronic general paralysis." "2nd. In all cases of long standing, the grey matter presents a granular appearance" — loss of form again, and with loss of form, loss of function forever. With the loss of form, several of the ten "qualities" "peculiar to life," so far as these insane patients were concerned, were stricken from the list. 3rd. "That similar granular" — that is, the blood plasma failed to reach any higher organization than what is called tubercular matter — "degenerations are found in and around all parts of the brain and spinal marrow."

These examples serve to show that each and all of these ten separate and apparently distinct "qualities," or phenomena peculiar to "life," are due to the operations of the ordinary physical forces, on the forms of organized inorganic matter; and whoever desires to reduce their phenomena to the simplest possible conceptions will, probably, like myself, find that it is in form and motion.

And furthermore, these two simple physical elements of form and motion embody the central ideals or units of organic life from a physical basis, and explain, in an understandable and intelligent manner, the *modus operandi* of all therapeutic, remedial and hygienic measures whatever. As motion is the central ideal unit of therapeutics, so, loss of form is the central ideal or unit of pathology; or, restricted to its narrowest possible limits, morbid anatomy. All the records of morbid anatomy can be merged into the central ideal of lost forms, and the only difference between the various physical appearances of lost forms, is merged into motion.

Thus, the calx substitutions for tissues of normal form so frequently found in the aged, differ from what is called fungus or cancer, found at all stages of life, solely in their motion. In the calx motion is reduced to its minimum; while, in the so-called cancer or fungus, it is at its maximum, and that maximum much greater than in tissues of normal form. And as motion is the simple unit of force, the active cancer, or fungus, destroys life with much greater certainty and rapidity than lost forms with intermediate grades of motion, as fat, fibrin, etc.

The classification of therapeutic agents,* submitted to you three years since, is thus demonstrated to be critically correct and scientifically accurate. Experience may render some subdivisions expedient, based on their influence on motion, but promoting and retarding constructive and destructive metamorphosis; or otherwise, nutrition and oxidation of the tissues (both being merged into motion), are the simple ultimate physical elements of all therapeutic, remedial and hygienic measures; or, in a wider sense, form and motion are the ultimate, simple physical elements of the forces and phenomena of organic life, thermal, sensory, emotional, chemical and intellectual.

* See "Chicago Medical Journal," March 1, 1869, p. 157.

Over the other ultimate simple physical element of organic life, to wit: forms, neither therapeutic, remedial, or hygienic agencies or measures, exercise other ultimate influence than destruction; which is, again, simply motion. All operative surgery is merged into the ultimate simple physical element of motion, in the destruction of lost forms.

In general pathology, the long list of the so-called diseases are merged into the same simple physical units of lost form and motion. All the so-called diseases, remedial only by surgical proceedings, are merged into the unit of lost forms. All the so-called exanthemata, as small-pox, scarlet fever, measles, etc., as well as the virus of serpents, insects and other animals; cutaneous diseases, so-called, syphilis, etc., are merged into the unit of form changes or forces, and, ultimately, into the simple physical unit, motion; and are brought within the domain of general pathology, in virtue of their power, as form forces, or modes of form force, to substitute their own, or some modification between their own, and the normal forms of human tissues. The whole catalogue of the so-called febrile diseases are merged into the modifications of the molecular arrangements of the normal form and motion of the tissues.

If there is a solitary fact in organic life, physiological, pathological, or therapeutical, which cannot be merged into these simple units of form and motion, it has escaped my scrutiny. As a simple, earnest seeker after truth, no fact, or facts, have been avoided, but each has been squarely faced, and none have been found irreconcilable with life from a physical basis exclusively.

Two cases coming under my professional notice, to-day, of very opposite characters, may be cited in illustration (29th December, 1869):

In consultation. Sarah, aged 8, has been sick, or noticed to be unwell for four days past. 9 o'clock, A.M., temperature 108; pulse 250; respirations 60; pupil dilated; eye globes deeply injected, and lids cement together, in a little while, with matter; tongue purplish red; throat not seen; is very impatient if disturbed; swallows as well as any human being can in her condition; skin covered with minute red dots, in places so closely packed together as to present a continuous scarlet surface. The diagnosis was scarlet fever; and the prognosis unfavorable. Ther-

apeutical indications, tonics, stimulants, and anodyne, to restrain excessive restlessness. Such is a statement of the case in the methods now in use by the profession. Can the phenomena of this case be reduced to simple understandable physical elements? It seems to me that each and every symptom can be merged into nothing else than motion. What is the significance of the temperature, circulation and respiration but motion? And motion at a velocity altogether incompatible with life for many hours, alone. Why this motion? Existing and accepted philosophy declares it to be due to the presence of the poison or virus of scarlet fever in the system. And how does the virus or poison of scarlet fever produce this excessive motion? In no other possible way than by changing forms; for, if the forms of the tissues were undergoing no changes, no such excessive motion could be developed. Then in reference to therapeutics, the word tonic is certainly misleading in producing mental conceptions corresponding with the facts and requirements of the case. It comes from tone, to strain, or stretch, in reference to strings, or wires, whose vibrations produce tones in musical instruments. If by any fanciful use of the imagination the phenomena of this child's case can be compared to the chords of a musical instrument, they will be found, indeed, sadly out of tune; but will straining or stretching help to restore them? Rather is not the simple scientific indication to retard motion? Again, the term stimulants comes from the word stimulate, literally, to goad, or urge on. In medicine, it is true, it is understood in the sense of increasing, temporarily, vital energy or force. But what, it may be asked, is there vital in phenomena of motion presented by this child? Will she be profited, or her chances of life increased by additional energy — that is motion? Surely, such a conception would be most absurd. The facts are that motion, physical motion, is already in excess, and the sole scientific indication is to "retard destructive metamorphosis" of tissue. Once more, in the technology in use by the profession, she would be designated as in a state of great "exhaustion." Exhaustion literally means being deprived of strength, or spirits. Does it indicate exhaustion, that is, emptied, to have a temperature ten degrees above natural? Or for the heart to contract 250 times per minute? Rather are not the phenomena due to terrible energy? Motion incompatible with

the continuance of forms, owing to its velocity above the normal standard of human beings? At 6 P.M., nine hours after, the spirit of the little sufferer passed to its celestial abode; and the organized materials of her body given up to other physical motion, in putrefactive decomposition.

T. B. A.; aged 10. Well cared for; goes to school, and stands at the head of her classes nearly all the time; studies hard; eats but little, except cakes, candy, taffy, pies, etc. Has headache; temperature 98½; pulse small in volume, and quicker than natural; skin pale, tongue red, and covered in middle with dark-brown fur; is, however, cheerful and pleasant; bowels sluggish; nothing could be ascertained in regard to renal discharges. The diagnosis of the parents was that she was bilious, and had the neuralgia. Mine was somewhat different. All the symptoms were merged into the unit of motion, which was certainly too rapid in her cerebral masses, as evidenced by the pain above the eyes, and the circulation. The pallor of the cutaneous surface indicated too little motion, and very likely retention of the results of tissue metamorphosis. A saline draught, to promote motion, was prescribed; and in the evening the child was better, with temperature 99½, and pulse fuller and slower. A warm bath was prescribed before going to bed. Next morning, temperature 98½. The indication was to increase motion in the interest of nutrition, or constructive metamorphosis, for which purpose iron, quinine and sulphuric acid were prescribed. To have honest food, and little or no trash. This evening, January 1, 1870, convalescent; exultingly tells me she has eaten a pound of beef-steak, to-day, but thinks it very funny she can't have candy, mince-pie, cake and hickory-nuts on New Year's day.

It seems to me, therefore, that these two simple physical elements of form and motion are the true foundations and corner-stones of a science of life, from a purely physical basis; and inasmuch as they absolutely cover the whole of the phenomena, or "qualities" of organic life, must, sooner or later, be so accepted by the scientific world, and sciences of physiology, pathology and therapeutics constructed in accordance; for the simple reason that they will be true, and correctly represent the facts of organic life to the mind of each student.

ARTICLE III. — *Cases in Surgery — Abscess in Long Bones.*
By H. O. HITCHCOCK, A.M., M.D., Kalamazoo, Mich.

CASE I. — Probable abscess of the humerus following a blow; caries of the whole bone; amputation at the shoulder-joint; recovery.

C. S., of Climax, Mich., suffered somewhat during his military service — 1862 to 1865 — from camp diarrhœa, but had pretty fairly recovered from its effects. In February, 1868, while at work drawing wood, he received quite a severe blow about midway of the right arm, not so hard, however, as to fracture the bone or greatly to contuse the flesh.

This was soon followed by severe, deep-seated pain, from the middle of the arm to near the elbow-joint. The pain was dull, heavy, and almost unendurable, and accompanied by considerable swelling, which was poulticed for a number of weeks, after which an abscess was opened near the elbow, which opening never healed. The discharge of large quantities of sanious pus did not wholly relieve the pain which then appeared to be in the bone itself.

The disease has been steadily progressing ever since — new sinuses now and then opening, but never healing.

In the summer of 1869 an attempt was made to remove a suspected sequestrum in the upper half of the bone; but the bone was found to be so extensively carious the attempt was abandoned, and the disease was allowed its natural progress, except as modified by constitutional treatment.

The patient came to my office October 22, when the arm presented the following appearance: Nearly complete anchylosis of the elbow joint, with several sinuses leading down to both condyles of the humerus, which appeared to be carious; several sinuses along the arm leading down to the excavated medullary cavity, with two at the inner aspect of the shoulder joint, with thickening of the bone throughout its whole extent, and great infiltration of the soft parts.

Diagnosis, from history and present appearance, "caries of the whole humerus taking its origin in periostitis or endostitis, or both, with probable abscess in the shaft of the bone."

As the patient's health was greatly suffering from the constant

irritation and discharge, and as the whole bone, including its articular ends, appeared to be carious, I advised immediate amputation at the shoulder joint. This operation I performed October 26, 1869, making the oval operation of Baron Larrey.

The operation was quite a difficult and bloody one, on account of the greatly thickened soft parts around the joint, all of the blood vessels being greatly enlarged. The head of the humerus was found to be entirely carious.

The patient, after the operation, rallied very well. He was left in the charge of Dr. Seeley, of Climax Prairie, who informs me that the wound was completely healed and the patient in good health one month after the operation.

Case 2. — Probable abscess of the shaft of the femur after severe injury to the thigh, followed by internal necrosis, and extensive sub-periosteal abscess. Bone trephined. Cavity scraped. Recovery. P. V. W., a large, well-developed man, of 37 years, with no taint of syphilis or scrofula, a builder by occupation, presented himself at my office, Nov. 15, 1859, for examination and advice.

Five or six years previous, while raising the roof of a church, he received a severe raking injury in the right thigh, by the falling of heavy timbers upon its outer aspect. At the same time there was fracture and dislocation of the left ankle. The injury to the right thigh was considered by the surgeon then in attendance only muscular.

But a few weeks after the accident the patient began to suffer very severe pain in the right thigh, deep seated, as if in the bone. This, he says, was considered and treated as a rheumatic pain for three weeks, when, choosing to die rather than be in such agony longer, the patient insisted that his medical attendant should open it. This gave exit to a large quantity of sanious, watery pus, and afforded great relief to the patient. The cut of the knife has since that time remained as a sinus, continuing to discharge pus of the same character.

Six months after the accident the patient resumed, and has since continued, his occupation, though with much pain and great discomfort. While in the upright position, at first, but little oozing took place, but the lower half of the thigh would soon become swollen and painful, " as if," in his own expressive

words, "a dog were gnawing it." And when the abscess was nearly filled, every contraction of the muscles of the thigh caused the matter to flow from the sinuses. In hot days, in summer, this discharge was often immense, and at night he would close the labors of the day by evacuating the pus from the lower part of the thigh with his foot elevated. Such had been his life for five years.

On making, December 15, 1859, an incision ten inches in length between the biceps and vastus externus muscles, commencing one and a half inches above the knee-joint, the bone was found bare of its periosteum almost the entire length of the incision, and for more than one-half of the circumference of the bone. The surface of the bone was granular and somewhat crumbly. In the upper half of the middle third the femur seemed decidedly and somewhat abruptly enlarged, even to nearly twice its normal size. At this point of enlargement was found a round, as if smoothly bored, hole, about a quarter of an inch in diameter, leading to the medullary cavity of the bone. This hole was filled with a jelly-like substance, such as also covered the bone where denuded of its periosteum. The bone was, at this point, trephined, and a sequestrum, one inch long, by one-third of an inch wide, and one-sixth of an inch thick, was removed from the medullary cavity. The cavity was thoroughly cleansed by scraping away all granular and crumbly bone, as was also the denuded exterior of the bone, and in a few weeks the cure was complete.

About the time case No. 1 came under my notice, my eye fell upon the article of Dr. Geo. C. Blackman, in the October No. of the *American Journal of the Medical Sciences*, "*on certain points connected with the pathology and treatment of abscess in bone;*" and it seemed to me that the two cases above related, while contrasting with each other in many respects, are both typical cases to illustrate the history of abscess in bone when neglected.

Dr. Markoe, in a paper in the *New York Journal of Medicine*, May, 1858, on "Chronic Sinuous Abscess of Bone," as quoted by Dr. Blackman, describes a class of cases very like the above: "distressing, tedious, intractable;" "cases in which the inflammation of the bone begins as an acute attack, passing rapidly into suppuration, and in which the abscess, thus rapidly

formed, finds its way early to the surface, through the compact external shell of the bone, and is discharged, to the temporary relief of the sufferings of the patient, though it may be not greatly to his advancement towards a cure. * * * The opening not being free, and probably not being direct, accumulations of matter take place within the cavity, and new inflammations and suppurations are excited in the bone substance surrounding the original focus of disease; * * * and the bone is left perforated in all directions, by two, three, four or more, sinuses, generally all communicating with one another, and with a central excavation or chamber which marks the position of the original abscess."

The above quotation is a complete description of the history of the disease in the first case here reported.

The second case is in somewhat of contrast to this, for several reasons. The sinus in the bone was a direct and short one, and had the sinus in the soft parts corresponded exactly to that in the bone, the inconvenience to the patient would have been much less. But as the sinus in the soft parts was at some distance from that in the bone, the discharged matter dissected up the periosteum and made a large sub-periosteal abscess. Besides, in the second case, the bone around the sinus and abscess appeared to have become enlarged and eburnated, while that in the first case became carious.

This difference might have been owing to the difference in constitution and condition of the two patients at the time of the injury.

Mr. Hey, of Leeds, in his *Practical Observations in Surgery*, describes a case very similar to case 2. "I found," he says, "the periosteum diseased and thickened. The surface of the tibia was rough as far as the matter had covered it; and in the centre of the rough part there was a hole equal in bore to a goose's quill, which penetrated the bone transversely about a quarter of an inch." Mr. Hey, in this case, sawed out a wedge-shaped piece of bone, two inches in length, from the tibia, and thoroughly scraped and gouged out the diseased surface of the cavity, and his patient made a complete recovery.

In this case the pus seems to have been six weeks in coming to the surface, but was not opened till one year after. He says: "The pain was so great during this operation of nature, that, my

patient assured me, and that immediately after the removal of the carious part of the bone," (the operation was done before the days of chloroform) "that she had suffered more pain during the whole of the six weeks above mentioned, unless she was asleep, than I had caused during the operation necessary for removing the unsound bone." "It is surprising that such a perforation should have been made through so firm a part of the bone without any extensive caries in the lamella." "The perforation appeared as if it had been made with a gimlet."

Dr. Nathan Smith, in a paper on necrosis, in his *Medical and Surgical Memoirs*, edited by his son, Dr. Nathan R. Smith, referring to the acute inflammation which precedes the death of the bone, remarks: "When the shafts of the long bones are the seats of the disease, about the same time that matter is deposited beneath the external periosteum, there is formed a corresponding collection between the internal surface of the bone and the membrane surrounding the medullary surface, so that there exist two collections of matter, bathing the opposite sides of the walls of the bone. This fact, which I deem of great importance, as being essential to the correct treatment of the disease, I have ascertained, in repeated instances, by the operation which I have performed for its relief, namely, the trepanning the bone."

Dr. Blackman quotes several cases by Dr. Benjamin B. Simons, of South Carolina, in which he trephined bones for abscess, in various stages of the disease, in seven cases, all of which completely recovered.

In the first case reported in this article, had the humerus been trephined soon after the accession of the severe pain which followed the blow, in all probability the patient would have recovered with a sound and useful arm. In the second case, had the same operation been performed, a like result would probably have followed, and the patient been spared five or six years of great pain and discomfort.

These two cases teach us the great importance of distinguishing the symptoms which indicate abscess of the bones, and of prompt action for their relief. Here is a fine field for true conservative surgery, not to give the management of disease up to nature, but promptly, and in good time, to interpose a minor operation, so as to arrest the natural progress of disease, and to prevent the

necessity of a more formidable operation, and the loss of limb and of life.

ARTICLE IV. — *Venereal Excess, with Mental Impairment.* By JAMES S. WHITMIRE, Metamora, Illinois.

THERE have been, during the last few years, under my notice, several cases of diseases of the genital organs produced from excess, or rather their abuse; three of which presented different degrees of mental manifestations of derangement, all originating, probably, from the same cause, and resulting in physical and mental depravity.

The first, J. P., aged 26, farmer, married six years, and the father of two children. He consulted me during the month of March, 1867. He had a wild look out of his eyes, which were unsteady and vacant, and had a firm conviction that he had disease of the heart, which, he said, pained him, and insisted that it was swelled, and he maintained, persistently, the idea of impending dissolution. He was afraid to sleep; there was great restlessness and insomnia, so that his family and friends had to watch with him all night, and they informed me that they had not known him to sleep more than one hour at a time for more than a fortnight; his memory was accurately retentive of circumstances and dates, but he seemed to have no reasoning capabilties, and to have lost all filial and paternal impulses. His marriage relations had ever been of the most pleasant character; and this, probably, in connection with his lack of general intelligence, is what led him to excessive venereal indulgence, resulting in impotence, a shattered constitution and a disordered mind. He told me that he had not had a complete erection for more than six months, and consequently every attempt at copulation had proven unsuccessful.

Ever since this debility or laxity of his genital organs had existed, he had been troubled more or less with lecherous dreams during sleep, and consequently with nocturnal emissions, without the least sign or attempt at erection. This continuous drain on the nervous system, persisting after the impossibility of coition, still tended to render more permanent his mental and physical disabilities. His appetite had become impaired, his bowels

obstinately constipated, and blood impoverished, so that, for all intents and purposes, he had become a mere vitalized wreck of frail humanity—a confirmed hypochondriac. His parents had procured the services of an irregular practitioner in the neighborhood, who had been tinkering with him for several months, and more than likely without the least conception of the real cause of the difficulty. What the diagnosis of the doctor was, or what his treatment, I am unable to say, but certain it was that the patient was growing more and more demented from day to day. Believing that all this train of evils had come from excessive venereal indulgence, and the nocturnal emissions from irritation, or rather, a peculiar irritability of the urethral canal about the mouths of the seminal ducts and the bulbous portion, I at once set to work to remedy the evil, by local as well as general treatment.

This condition of things is not unfrequently brought about in young men, from the vicious habit of masturbation, but, in twenty-four years of experience as a practitioner of medicine, I never before witnessed such a case in the marital state. In fact, I believe it is usually the case, that young men addicted to the habit, are recommended to marry, in order to avoid the evils consequent upon the practice. The indications for treatment in this case were clear enough, provided my theory of the difficulty was correct. It was, to lessen the nervous irritability of the bulbous and prostatic portion of the urethral canal; to enrich the blood; increase the powers of digestion, and to give general tone to the flagging energies of the system. My first step was, therefore, to thoroughly evacuate the bowels with a saline cathartic (they had been in a constipated condition for months, and never moved without the aid of medicines); next, I cauterized, with nitrate of silver the prostatic and bulbous portion of the urethral canal, by the use of Lallemand's porte caustique, and administered mucilaginous and demulcent drinks to obviate any inflammation that might arise from the use of the caustic. I regulated the bowels by a tonico-laxative pill given every night at bed-time, with the assistance of a cold-water enema in the morning, which was, at least, an adjuvant in restoring the tone of the debilitated organs. I gave tone to the nervous system, by the use of a ferruginous preparation, called the liquid oxy-sulph. of iron, the formula for which I found in the Chicago Medical Journal:

℞, Ferri Sulph, - - - - - - - ʒ ij;
Acid Nit., - - - - - - - - ʒ ij.

Rub well together, then add

Aqua, - - - - - - - - ℥ iss.

In ℥ j of this solution, I dissolved quinine ʒ j, strychnia, grs. iij. Dose, six drops, in water, three times per day, before meals. The iron in this prescription served to enrich the blood, by the increase of the red corpuscles, the nitric acid and quinine to give tone to the digestive apparatus and increase assimilation, and the strychnia to give a fillip to the general nervous system by its specific action on the great centres, and, through them to increase the muscular tonicity of the bowels, which had become almost entirely paralyzed; and last, but not least, I administered bromide of potassium, grs. xx., in water, one hour after each meal, which tended to relieve the insomnia, produce sleep, and soothe the nervous irritability of the genital organs. I ordered beef tea alone, until such times as his appetite began to return and relish solid food, after which, he was allowed beef-steak, oysters, fruit, and roast potatoes. The foregoing treatment was steadily pursued for about three months, with the interruption of the bromide occasionally after meals, giving it, at such times, always at bedtime. At the end of two weeks, he began to show decided signs of improvement in every particular, and at the end of three months, to all appearances, he was perfectly restored to his family, with his usual mental equilibrium, and the proper vigor of all his other functions. He is now a successful grocer, doing business in one of our adjacent villages.

Another case, son of J. B., aged 19, farmer, had been complaining, and the family thought, acting curiously for six months. He finally lost his appetite, became dyspeptic, emaciated, taciturn, and had an idea that he was ill unto death, and must die; but did not know why, or what it was that was going to end his existence. The family had noticed that his mind was out of balance for some time, but there was no reason of which they knew that could have produced this condition, as he had neither been sick, nor received any injury.

As in the former case, the family had consulted an irregular practitioner regarding his condition, and he had been under his care for considerable time. Finding, however, that the young man's

mind was growing gradually worse, I was consulted in regard to the case during the month of March, 1869. The family could give me no clue whatever to the difficulty, and the boy had no idea that his infirmities were brought on by his vicious habits. I accused him of such practices, but he persistently denied it. I was satisfied, however, from his general appearance, of what was the cause of his mental aberration, and accordingly told his father, who, of course, was taken quite aback, and had never suspected his son of such vicious practices. I directed that the young man should never be permitted to be out of the company of some of the family, and that his father should sleep with him every night. I cauterized the urethra, as in the former case, and put him under the same treatment, with the exception of the strychnine. In about four months, the boy was completely recovered, and is now a fat, hearty, cheerful young man, doing his accustomed labor on the farm.

Another case, William S., aged 22, a farmer, was a young man of good intelligence, and knew "what was the matter," and the cause of it. He had lost all interest in his business, and felt disinclined to any exertion whatever. He had lost his usual animation — so much so as to create much anxiety in the minds of his parents and friends. He had had nocturnal emissions for several months, so as to greatly annoy him, and had not had an erection for more than a year. He felt a natural delicacy in declaring his shame to his home physicians, and therefore resorted to some of the advertising charlatans of the city of Chicago for advice. After having made one or two trips to that city, and having been fleeced out of one or two hundred dollars by that delectable class of mountebanks, he concluded, on "sober, second thought," to try what virtue there was in home institutions. He therefore came to me, about two years ago, and laid his case before me. I put him through a very similar course to that of the former two cases, and in a very few months he had recovered his wonted ruddy complexion; his vigor and animal spirits had returned, and he was lively, energetic and active as ever. After his discharge, I never heard any complaints from him till this summer — 1869 — when he came to me, and, with considerable anxiety, said that he was entirely well, with one exception, and had been ever since his treatment two years previously. The exception

was, that along with his spirits and wonted energy, he had never recovered the power of erection, remarking that he had never had a presentable penis for two years, and asked my advice as to the means of remedying the evil. I prescribed ten drops of diluted phosphoric acid, in water, three times per day, for one week, when it was to be increased one drop at each dose per day, till the maximum dose would be 25 drops, after which he was to see me again. At the end of this time, finding but little if any aphrodisiac powers in the acid, I prescribed acid phos. dil., hashish fluid ext., aa ʒ iv; of this the dose was twenty drops, three times per day, and increased one drop per day at each dose, till he took 40 gtt. At the same time that he began this prescription, I gave him the $\frac{1}{20}$ of a grain of strychnine, three times per day, and ordered the use of strychnine ointment to the perineum. About the time that he should have been taking 40 drops of the last prescription, I saw a notice of his marriage to an estimable young lady, which to me was conclusive evidence of his complete recovery. A few days ago I met him on the street, and made inquiries as to his welfare. "ALL RIGHT," said he; "I have been married now two months, and have no difficulty in performing all the duties of the marital relation." Of course, I advised prudence.

ARTICLE V.—*Tænia Solium.* By D. C. DAVIES, M.D., Columbus, Wis.

IN the JOURNAL for December, 1869, we notice two cases of Tænia Solium, reported by Dr. Owen, of St. Luke's Hospital, in which that learned physician seems to manifest a decided preference for pumpkin seed, as an ejective agent in cases of tape worm. It is not our desire to differ with Dr. Owens, for the sake of being contrary, but from higher motives—that of elevating our profession in all its several departments, while in pursuit of truth, be that even in the simple treatment of tape worm. We have found the ætherial extract of male fern, in all cases where we have had occasion to use it, answering our highest expectations, as the following cases will illustrate:

Case 1.—Mrs. R., æt. 35, a native of Wales, who, upon first appearance, would lead a physician, owing to her ænemic, cadaverous and nervous condition, to dream of some uterine affection. Few questions, however, soon dispelled such conclusion, as the following group of symptoms will show: Bowels irregular and sometimes accompanied with a sort of gnawing sensation—appetite capricious—sleep disturbed—unaccountably nervous and fretful—despondency, almost bordering on hypochondriasis—and occasionally voiding "pieces of some white stuff" with the fæces, which, after due examination, we found to be segments of tænia solium. Satisfied as to the correctness of our diagnosis we ordered the patient to abstain from all food until further orders; and prescribed the following draught, to be taken before retiring, and the same the following morning:

℞ Extracti filicis ætheris, - - - - ʒj ss;

S.—To be taken in a cupful of fresh milk.

At 10, A. M., the following day we ordered the annexed draught:

℞ Ol. ricini, - - - - - - - ʒj;
Ol. Terebinthinæ, - - - - - - ʒj;
M.

Calling again, some three hours later, we found she had free evacuations, containing several pieces of tape from four to six inches long, and a large number of segments. Not satisfied with the appearance of things, we gave the following powder:

℞ Pulv. Scammon.
Calomelanos, - - - - - aa gr. xij;
Pulv. Gambogæ, - - - - - gr. vj;
M.

In less than an hour from the taking of the powder the balance of the tape was expelled, measuring twenty-seven feet intact. This specimen we have preserved.

Case 2.—Mr. O'R., æt. 42, a native of Ireland. Placed him under the same treatment, with this exception, that we gave him ʒ ij of the extract in each dose, and also double the powder, believing in the old axiom that purgatives would not kill an Irishman. The tape was ejected in half an hour after the powder was taken, but I failed to preserve this specimen intact, owing, I

suppose, as stated by the patient, to the "d — n crather coming through in sich a divil of a hurry." Neither of the pieces would measure over ten inches, but from the number we should think it would measure from thirty to forty feet.

It may be surmised that the castor oil and turpentine, or the powder alone, would have ejected the tape, but that could not have been so in the last case, as he had, previous to my seeing him, taken enormous doses of calomel, jalapa and gamboge, without any other effect than catharisis and the ejection of some segments of the tape.

In conclusion, we will venture one remark on Dr. Owens' treatment, to wit: That if he had prescribed the oil of the male fern in larger doses we think he would have met with better success. We believe in the most active treatment in the ejection of all such "varmints."

ARTICLE VI.—*A Case of Placenta Prævia.* Reported by I. B. WASHBURN, M.D., Star City, Indiana.

THE following case occurred in the practice of Dr. D. Rea, of Royal Center. Dr. Rea says that, August 17th, 1869, Mr. H. called at his office and asked him to prescribe for his wife, as she was flooding.

The doctor gave him opii pulv. gr. ss., plumbi acetas gr. iij, to be given every three hours until the hæmorrhage should cease. He heard nothing more from his patient until the 24th, when he was called to visit her because of a recurrence of the uterine hæmorrhage. He made an examination, and found the os slightly patulous and rather soft and flabby, but there were no symptoms of labor.

He repeated the opium and lead, which seem to control the hæmorrhage again.

The next morning he was called in great haste and found his patient flooding fearfully. He immediately dispatched a messenger for assistance, but before any arrived, the doctor, knowing that something must be done immediately in order to save his patient, passed his hand through the placenta and ruptured the membranes. The hæmorrhage ceased, the vertex prevented and pressed upon the placenta, compressing it so that a further dis-

charge of blood seemed impossible while it remained in that condition. Upon my arrival the patient was anæmic, pulseless at the wrist, extremities very cold, and she was in a semi-conscious state. The ragged edge of the placenta could be felt around the head of the child, the os was well dilated, the occiput opposite the left acetabulum, but there were no contractions of the uterus. Nature seemed exhausted.

We gave her ammonia carb. and camphor freely, alternated with a decoction of ergot, in small doses. In a short time there were signs of reaction.

We then prepared to deliver by version, but upon introducing my hand I found the head engaged in the upper strait, and believing the fœtus dead because of the loss of blood, we increased the stimulants, both general and uterine, and soon saw our patient delivered of a large, still-born male child. There was no more hæmorrhage. We applied heat externally and gave her ammonia and alcoholic stimulants freely, internally, after which she reacted gradually and slept.

The next day she was attacked with puerperal mania, which lasted about three weeks, but she recovered finally.

Her recovery being slow, notwithstanding Dr. Rea gave her good attention, through the meddling of officious neighbors, they changed to one Osborn, who, if he ever graduated or even attended a course of lectures, did so in "Brush College" or one of the "Sums" of Cincinnati. He is a medical "bushwhacker." He labeled one of his bottles "femail pils," and says that morphia is made of "*minerals and combustibles.*"

ARTICLE VII. — *A Case of Poisoning with Sulphate of Copper.* Reported by Dr. D. B. HILLIS, Keokuk, Iowa.

AT 11 o'clock, on the night of the fifth of August, 1869, I was called to see Miss W. R., a large and well developed servant girl, æt. 18, doing housework in the family of Mr. O. of this city.

I was informed by him that the girl was in good health until about dusk of that evening, when, "all at once," she complained of intense pain in the head, soon followed by convulsions, and cramps in the stomach and bowels. When I arrived, she was

having severe clonic spasms of the jaws, arms and legs ; and, when able to speak, complained bitterly of the pains, especially of those of the stomach, declaring that she was " burning up." The pulse was full, hard, and 120 per minute. Anything like continued pressure on the epigastric region caused great suffering.

I readily concluded the case to be one of poisoning, by some agent of great virulence, which she, after some persuasion, admitted, but obstinately refused to say what it was, or where obtained. She coveted death ; and positively refused to swallow anything, until I threatened to use the stomach pump, which I made her believe was an engine of great power. I gave her the whites of six eggs, all that could be had in the house, followed by copious draughts of sweet milk, and, in a short time, by an emetic of ipecac and tartarized antimony, which acted promptly, causing the ejection of a large amount of ingesta, intermixed with a dark-brown fluid.

To enforce this treatment, required at least one hour and a half from the time I first saw her. The spasms, of which she had not less than thirty in my presence, began to decrease, and subsided entirely within the next hour. I was of the opinion that she had taken arsenic, and, after giving the last emetic, had sent for the hydrated sesquioxide of iron ; but before the messenger returned with it, the patient, having concluded that she could not die, as was her desire, and being exceedingly anxious for relief from the agonizing pains, admitted that, about two o'clock that afternoon, she had taken two spoonsfull of blue vitriol, in brandy ; but whether large or small spoons, solid or fluid measure, she would not tell. The true enemy now being known, I changed front accordingly, and gave the prussiate of potassa, in fifteen grain doses, every hour, until the active symptoms of poisoning ceased. With the second portion of the antidote, a large dose of castor oil was given, for the purpose of removing from the intestines any copper they might contain.

Suffice it to say, that after the third portion of the potassa — about twelve hours after the poison had been taken — I left my patient enjoying a quiet sleep, and from that time on there were no more active indications of the presence of the agent which had given so much trouble, save the severe corrosion, or inflammation of the membranes, with which it had come in contact, and from

which she recovered, under the use of aconite and belladonna, in tincture, together with demulcent drinks, and hot woolen cloths to the surface. I will just add, in conclusion, that for me the case was possessed of three points of special interest. The first, the length of time, five hours intervening, from the taking the poison until the development of the first symptom; the second, the entire absence of the usual nausea and vomiting produced by the various preparations of copper; and the third was, the efficiency and reliability, of the prussiate of potassæ as an antidote in such cases.

ARTICLE VIII. — *Death from Strangulation of a portion of the Ileum.* Reported by WM. L. LINCOLN, M.D., Wabashaw, Minnesota:

A SINGULAR case came under my observation, which, if it serve no other good, may throw its little share of light on the question lately brought again to my notice — How far can the lower bowels be filled by injection?

On the morning of November 8, 1868, about 10 o'clock, I was called to visit A. S., who was reported to be suffering from colic of a severe and obstinate form. The history of the case was this: He had eaten a hearty breakfast at his *camp* in the woods, where he was trapping, about 11 o'clock A.M., after which, for a couple of hours, he disposed of his game, and then he paddled his canoe and set traps until nightfall, after which he had walked to the town, some six miles. Between nine and ten in the evening he went with a friend in an oyster saloon, and ate a dish of raw oysters, and soon after retired for the night. About three o'clock A.M. he awoke with severe pain in the umbilical region, and suffering some nausea. He drank warm water, with mustard, from which he obtained free emesis without any relief of pain. He also applied mustard paste to his bowels. Afterwards he took some remedies prescribed by a Homœopathist who was at hand, and continued to grow worse until his sufferings were past enduring. His countenance portrayed extreme agony, and his first words, on my entering the room, were: "O, doctor, can't you do something for me quick? If you can't, I shall die!" He

located his pain in the umbilical region. There was no tenderness on pressure over any part of the abdomen; no coat on his tongue, and his pulse was but slightly accelerated. The symptoms pointed to intussusception.

He got, by endermic injection, one-fourth grain morph. sulph., and directing warm water to be had in readiness, I left him. Returning in fifteen minutes, found him perfectly free from pain. I then proceeded to prepare a rectum tube by winding a wet rag around it to form a collar to prevent escape of the fluid, and proceeded to inject six quarts of water, not leaving half a teacupfull in the vessel, when he desired a passage, and evacuated nearly the same quantity as injected. About five hours after the endermic injection, the pain returned, not less violent than at first; but a repetition of the injection was followed by the same happy effect. In the succeeding twenty-four hours, I repeated the injection per rectum, twice, each time using about the same quantity as at first, with no evacuation except the water injected. It was necessary to repeat the endermic injection every five or six hours, for when the opiate effect was past, his shrieks would disturb the neighborhood. In the evening of Wednesday, the 11th, he had stercoracious vomiting, and sank rapidly for some hours, but rallied on the morning of Thursday, and pain returued not less severe than formerly. The injections of morphia gave prompt and full relief, and were repeated every five or six hours, until Sunday, rhe 15th, in the afternoon, when he vomited a fluid having a fœcal odor, which was followed, in a few hours, with death.

Monday, 16th, eighteen hours after death, I made a *post-mortem* examination, assisted by Dr. Milligan, who I invited to be present.

On making the abdominal section, there was no appearance of serous inflammation on intestines or abdominal walls; but the cause of the pain and death was at once revealed. A knuckle of the ileum, some five or six inches from the ileo-cœcal juncture, was tied in a complete knot; about seven inches of the ileum having passed through the knot, and being ligated thereby. The mucous membrane of that part of the intestine forming the knot, was thickened and inflamed, and highly vascular. The knuckle presented less departure from a normal condition. That no one may be in doubt as to the kind of knot formed in the ileum,

will instruct how to form the knot: Take a rope or string, and make fast the two ends to some object; now take the free end, which is a knuckle, and pass a single knot in it, as near the end as you can. You will at once perceive that, if to your rope you had attached a piece of cloth to represent the mesentery, you could tie the same knot. I make this remark, because some physicians to whom a relative of my patient narrated the case, declared that such a knot was an impossibility.

The case proves to my mind that nature can do what the surgeon can neither do nor undo, and that water can be injected into the rectum so as to fill the colon to the ileo-cœcal valve.

Correspondence.

GLYCERINE AND CARBOLIC ACID FOR BURNS.

To the Editors of The Chicago Medical Journal:

At the Gaiety Theatre fire in this city, some three weeks since, Mr. Bangs, photographer, was badly burned about the face and hands. The latter were affected so that the skin peeled off like gloves. As soon afterwards as possible, the burns were dressed with linseed oil, and morphia was administered to relieve pain. I first saw the patient next morning. I dressed the hands and face with the following:

℞ Glycerine, - - - - - - ℥ vj;
Acidi Carbol., - - - - - - ℥ j; M.

This augmented the pain considerably for an hour or more. It was applied freely, with a camel's hair pencil, and the fingers afterwards wrapped up, separately, with strips of linen lint. The dressing was changed daily, by soaking the lint in warm water, washing the parts by squeezing warm soap-suds out of a sponge over them, and re-applying the glycerine and carbolic acid. The patient had to have morphine once or twice daily, to relieve the pain. Eighteen days after, while others burnt no worse, but had received different treatment, were still suffering, Mr. Bang's wounds had healed and new skin formed, leaving no scar on the face, although the epidermis had all peeled off. After

this, simple cerate, or pure glycerine, was substituted, and he is now able to resume his work, although his hands are still very tender.

In the October number of the *American Journal of the Medical Sciences*, is a statement of a severe burn of the legs, from the knees down, treated by C. C. Lange, M.D., of Pittsburg, by linseed oil, 8 parts, carbolic acid, 1 part. I would say to the profession that this is too strong, too large a proportion of the carbolic acid, and must have produced intense suffering, besides the danger incurred by its *absorption* from so large a surface. A drachm to four ounces of glycerine, is as strong as should be applied, or as is necessary. I consider the glycerine preferable to the oil — is mild, protects from the air, and mixes thoroughly with the acid, which it dissolves.

On a portion of one hand, at the patient's request, and on his face, I tried the application of furniture *varnish*, in which he had great faith, from seeing a paragraph in the papers recommending it. The parts did not do so well, apparently, and it was discontinued, and the glycerine resumed, when they satisfactorily healed.

T. Williams, M.D.

IMAGINARY CASES.

Chicago, *December* 27, 1869.

To the Editors of The Chicago Medical Journal:

I have lately observed that you have begun, with a strong hand, to put down an evil that has attained no inconsiderable proportions. I mean, simply, the palming off upon the readers of professional journals of cases that only exist in the imagination of the writer, and gravely stating as facts, things that never have occurred; thus misleading many young men who naturally seek information in the pages of medical periodicals, and disgusting those whose experience enables them to see through the flimsy veil of assumed knowledge, and understand what amount of meaning there is in the *sesquipedalia* words that freely flow from their pens. Truth does not require words of such "learned length and thundering sound," but is contented to appear in the sober garb of good English, making a far better appearance than falsity does in bad Latin.

I hope you will continue to render the notoriety thus sought after less and less desirable.

In thus indorsing your cause, I know that I only express the opinion of every member of the medical profession in good standing among his fellows. So go on with the good work.

L.

Hospital Reports.

ARTICLE I. — *Cook County Hospital. Under the care of* CURTIS T. FENN, M.D.

LIGATION OF EXTERNAL ILIAC ARTERY — DEATH. *September* 17. — Dr. Powell tied the left external iliac for diffused traumatic femoral aneurism, in the case of J. L., a stalwart Indiana farmer, aged 28, admitted to a private ward, September 13, 1869.

The patient died on the 20th, with symptoms of peritonitis.

During the last year of the war, he received a gunshot wound in the lower part of the left Scarpa's triangle. The ball glanced upward, and was lost. The wound healed.

In August, 1869, after a hard day's work, cradling in the harvest-field, he perceived a small swelling in the region of the cicatrix. It came in a day, and without pain. The next day, he felt "a rushing" there. The tumor increased with great rapidity from this beginning, and on the day of the operation presented a terrible aspect. A diffuse, ovoid, firm elastic mass occupied the anterior and inner aspect of the upper third of the thigh. Its centre was over the lower portion of Scarpa's triangle.

The enlargement was limited above by the abdomen, extending a little above Poupart's ligament, and diminished downward, reaching two-thirds of the way to the knee. The circumference of the thigh at its largest portion was nineteen and one-fourth inches greater than the corresponding measurement of the opposite side. A pulsating movement of the surface was visible across the amphitheatre. The skin was hot and shining. A rosy tint over the centre was deepening to red. A thrill of great force was communicated, when the hand was laid on the tumor. A

loud rushing sound greeted the ear by auscultation; compression of the femoral artery, above the pubis, caused it to cease. The limb was comfortable when at rest, the circulation good, the temperature about normal, and, aside from the sense of weight and uselessness which it gave, the patient suffered no inconvenience. There was little general loss of flesh or strength, yet mental anxiety and suffering were depicted.

At a council of surgeons, it was decided that ligature of the external iliac afforded the best chance of arresting the disease.

Ether was administered. The patient came under the influence of the anæsthetic with difficulty. His breathing was accompanied by such spasmodic abdominal exertion as to interfere with the operation and endanger the peritoneum as soon as it became exposed. The incision was according to Abernethy's method. The application of the ligature was tedious, owing to imperfect anæsthesia, and the consequent hernial protrusion of the peritoneum, in spite of all efforts to retain it. The wound was dressed with sutures, adhesive strips and cold compress. Difference in the temperature of the extremities was well marked. Artificial heat was applied to the affected side, and opium given to keep the patient quiet, with beef tea for nourishment.

He died the third day, with symptoms of peritonitis.

Post-mortem examination revealed the aneurism springing from the trunk of the profunda femoris. The ball supposed to be lodged in the region was not found, nor could its track be traced.

Dr. Powell regards this case one of great interest, and intends to publish it at the proper time.

Original Translations.

ARTICLE I.—*Clinical Lectures upon Mental and Nervous Diseases; Alcoholism, Alcohol and Absinthe, Absinthic Epilepsy.* By M. MAGNAN, Sainte Anne, Paris.

(CONTINUED FROM PAGE 696, VOL. XXVI.)

ALCOHOL, in man, as an animal, is incapable, alone, of provoking epilepsy; it causes tremor, but that is all. When, on the other hand, epileptic attacks supervene, you never fail to discover that a different agent from alcohol has provoked them, and this agent is usually absinthe.

Epilepsy is, then, I repeat it, an epiphenomenon, which can not be considered as the highest manifestation of acute alcoholism. Among the patients whom you will examine to-day there will be found a man aged forty-one years, a market porter, who, after repeated excesses with wine and brandy, devoted himself more especially to absinthe. He had had, up to this time, tremors and some hallucinations, when three days ago he was suddenly seized, at the market, with an epileptic attack. He fell senseless immediately; his countenance was distorted, at first very pale, it became violet, the lips were covered with froth, the arms and the legs exhibited convulsive struggles; at the end of a moment the patient aroused himself stupified thoroughly. Some hours afterward he became violent, declared himself pursued by assassins, saw animals around him. He entered yesterday the examining office, his delirium continues, with frightful hallucinations, but one point upon which I wish to direct your attention is the condition of mobility: you will perceive a tremor of the hands, quite considerable, doubtless, but nevertheless not at all exaggerated, less severe even than in a case of acute alcoholism of medium intensity; there has been then no successive progression of motor disturbances terminating in the epileptic attack; this has been superadded, momentarily, to the ordinary phenomena, but without exercising, either before or after, any appreciable influence upon mobility.

I might furnish you with the recital of a large number of analogous observations, collected by M. Bonchereau and by myself, but they would throw no new light upon the question which we are considering. However, I must recall to you an incident which I had the opportunity to observe at Bicêtre, and in which the man, to a certain extent, submitted himself as the subject of experiment, in order to serve as a demonstration of the effect of absinthe.

Cl. . . . (Louis), aged thirty-two years, entered the Bicêtre the 31st of October, 1863. This man, in excellent health, remained sober up to the beginning of 1861, at which date he became a wine merchant. He contracted, at this time, the habit of drinking; he took at first wine and brandy, then a little absinthe.

Alcoholic phenomena soon appeared, he experienced also vertigo especially. During the course of 1863 Cl. . ., to gain strength, made use of the absinthe liquor more freely; the attacks of vertigo became more frequent, and at a few days' interval he sustained two attacks, with sudden loss of consciousness, full, contorted face, convulsions of the arms and legs, bloody froth upon the lips, and biting of the tongue. One of the attacks occurred in church during a funeral ceremony, the other occurred on a stairway; in both cases they occurred unexpectedly.

Delirium, with frightful hallucinations, soon agitated the patient, and necessitated his sequestration at the Bicêtre; he arrived on the 31st of October, 1863, presenting the symptoms of an attack of acute alcoholism. He recovered quite rapidly, and at the end of a month was allowed to leave. On returning to his home he lost no time in resuming his old habits; on the other hand, alcoholic symptoms did not attend him.

Later, in consequence of a fresh abuse of absinthe, he sustained an epileptic attack similar to the preceding.

The patient was brought back the 28th of April, 1864, to the Bicêtre, where he remained, for his recovery, up to the beginning of June.

Discharged for the second time, he abandoned for some time the use of absinthe, but recommenced at the end of a few days to drink wine and brandy. His sleep became disturbed, hallucinations of a painful character manifested themselves; his appetite was lost, streams of pituitary secretion were discharged every

morning, and his limbs became tremulous. This condition continued two months, but Cl. . . ., finding himself weaker, had recourse again to his favorite liquor. The absinthe provoked, very soon, new epileptic attacks, C. . . . reëntered the Bicêtre, for the third time, the 5th of December, 1864. At the moment of his entrance he still bore upon his tongue traces of bites, convincing evidence of his last attack. Such was this observation, not to call it experiment. The subject is a young and vigorous man, entirely free up to that time from any alcoholic symptom or any convulsive phenomenon. Commencing with wine and brandy he became alcoholized, then giving himself up to absinthe he became epileptic.

During his first residence at the asylum the symptoms disappeared. Upon leaving he recommenced to drink; alcoholic symptoms at first supervene; he takes absinthe, then comes a new epileptic seizure. Another residence at the hospital, with a cessation of the symptoms. For the third time an excess of wine and brandy induce alcoholism; excess of absinthe, epileptic attacks which are superadded. Again residence at the hospital and sobriety, with cessation of the symptoms.

Can effect and cause be more intimately associated? Can we not, by doubling the dose, induce the effect of both alcohol and absinthe.

Absinthic-epilepsy could not be more clearly demonstrated. How much do these epileptic attacks, always in relation to the determinate agent which produces them, differ in respect to their nature from those which accompany chronic alcoholism? In this last case what happens! A patient presents epileptic or epileptiform symptoms; he enters the hospital, and during the entire duration of his residence we may observe several recurrences of attacks similar to the first under the influence of the most diverse causes, sometimes even without appreciable cause, absolutely as in patients suffering with certain cerebral lesions.

Chronic alcoholism exists indeed under analogous conditions; his cerebro-spinal system has sustained profound and persistent alterations. The prime cause exists altogether in the state of the organism, conditions very opposite to those of poisoning by absinthe, in which the sole cause is the poison.

What is the progress of acute alcoholism?

It would be difficult to form a just idea of the gravity of acute alcoholism from the statistics of the majority of physicians, and more particularly from English and American statistics.

Such wide variations occur in these documents that all comparison is impossible. Hence we believe it more useful, and of more practical interest to confine our investigations to observations collected at Paris, which enable us to form a more exact appreciation of all the elements of the problem.

In 1852 M. Delasiauve,* vividly impressed with the severity of certain cases of *delirium tremens*, published upon this subject an excellent treatise, in which may be found an accurate table of subacute *delirium tremens*.

Although the observations comprise but a small number of facts selected amongst the most important, there will be found, nevertheless, the proof of a very considerable mortality.

We shall draw, in the thesis of Doctor Contesse†, numerous documents, and so much the more valuable that they can in all points be compared to those which we shall obtain here. Among 5,238 patients suffering from various forms of delirium, entered at Bicêtre, from the 1st of August, 1855, to the 1st of April, 1862, M. Contesse found 1,000 alcoholic subjects, amongst whom there were 30 cases of death in the 34 first days after their arrival at the asylum; but the author, comprehending readily that this duration of 34 days would become unreliable by reason of its length, has added a table indicating the *deaths*, day by day, starting from the date of entrance.

In this manner we can, by embracing only the first five days, recognize the figure which reasonably indicates acute alcoholism.

After the 5th day the subjects of acute alcoholism do not die, properly speaking, of intoxication, *per se*, but rather from some of its complications.

Of the 30 deaths we find 21 during the first 5 days; there remains then but nine of them to be apportioned among the 29 days remaining of the 34.

**D'une forme grave de* delirium tremens, Delasiauve, *Revue Medicale et etragère*, 30 Avril, 1852.

†*Etude sur l'alcoolisme et sur l'étiologie de la paralysie générale*, Contesse, 1862.

These results, to which I particularly direct your attention, indicate sufficiently, by themselves, the existence of danger, especially in the acute period, that is to say, at the moment when the entire economy is under the pressure of the toxic impregnation. But among the 1,000 patients the acute and the chronic are indistinctly embraced. It is indispensable, nevertheless, to separate them, for the 21 deaths during the 5 first days, evidently refer only to cases of acute alcoholism.

We have been able to determine this relation by assuming, as a basis, our own results, which I shall submit to you, and we think we can show that, of the 1,000 alcoholic cases, about 260 were the subjects of acute alcoholism, which would give a proportion of eight deaths in a hundred.

You know, gentlemen, why I compare, without the least restriction, the statistical results of the Bicêtre with those of the Examining Office; it is because we have to deal with analogous elements.

Our patients of the Examining Office are different, for the greater part, from the patients who formerly were brought to Bicêtre; hence we find ourselves in identical conditions. The Parisian drunkards of 1862 do not differ, as I well know, from the Parisian drunkards of 1867.

Since the organization of the insane department of the Seine, 1st of May, 1867, up to this time, end of April, 1869, M. Buchereau and I have counted, among 4,866 entries, 231 cases of acute alcoholism, and 662 of chronic or sub-acute alcoholism, in all 893, out of which number we have lost, during the first 5 days, 3 patients only; more exactly, and omitting the chronic cases, 3 deaths in 231 cases of acute alcoholism, which gives 1.30 per cent. at the Examining Office, in place of 8 per cent., which was obtained at Bicêtre, I might even say that we obtained at Bicêtre; for, you know, the patients arrive generally in the afternoon, and the first treatment is given by the internes (resident students). The patients, then, who died on the first day were treated by us. The results obtained by M. Bouchereau are almost analogous to those of M. Contesse and to mine. How then can we explain this difference between 8 per cent. at Bicêtre and 1.30 per cent. at the Examining Office, with the same patients, the same physicians? I may also add that our pharma-

ceutical treatment at the Examining Office scarcely differs from that which we prescribe at Bicêtre. You perceive, gentlemen, that there is an X, an unknown quantity, and of this unknown quantity we shall now speak.

When a case of acute alcoholism arrived at Bicêtre, what was done?

He was perhaps violent, dangerous to himself, dangerous to the attendants. The first indication to be fulfilled was to protect him against himself, and to prevent him from doing harm to others.

The straight waistcoat was the remedy. This apparatus carefully applied had the effect to exercise a certain restraint over the thoracic movements, especially towards the base, but there the danger was but slight.

The subject of acute alcoholism, in spite of the waistcoat, continues his violence, strikes all around him, wounds himself and necessitates other precautions.

The bed is all ready to receive him. He is placed so much the more readily, that these patients, manifesting always a certain febrile condition, it seems necessary to place them in bed.

The subject of acute alcoholism remains in bed solely under one condition, that he be secured; it thus becomes necessary to fix him there.

To be tied to the bed, is death to the patient. You will understand this.

The patient is extended upon the bed; the straight waistcoat is laced, the arms, crossed in front, are secured by the aid of sleeves on each side of the thorax, and are solidly applied to the chest. This is an excellent means to render the lower part of the thorax immovable, to prevent the play of all the false ribs, and of two or three of the last ribs.

At the upper part of the waistcoat are two rings corresponding to the sub-clavicular region; bands passing through these rings are fixed below and behind at the upper extremity of the bed, and in order that the patient may not slip, that his head may rest easy, the pillow is placed between the bands which pass under the head, and the head is applied to it in such a manner that the whole anterior and superior part of the waistcoat remains tightly strained across the corresponding part of the thorax, which it fixes immovably.

As soon as the chest is thus clamped above and below, the diaphragm is set in motion, and abdomen respiration supplies, up to a certain point, the imperfection of thoracic respiration.

But the patient having his legs free, feeling ill at ease, makes incessant efforts to detach himself from the bed. Naturally this must be prevented. The legs are extended, brought together, and the feet, encircled with shackles, are secured to the extremity of the bed. The result of this is tension of the muscles of the abdominal walls, which especially hinder the efforts of the diaphragm. This is not all. Large folded sheets, placed across upon the belly and limbs, are secured to each side of the bed.

Thus garroted, the patient at first cries vociferously. His countenance becomes purple, his eyes injected; the swollen jugular can scarcely empty themselves; the whole cephalic extremity becomes congested; the countenance becomes puffed and glistening, the neck swollen, sometimes bulging out like a cushion above the rigid ring of the waistcoat, which strangles him. In a state of inexpressible anguish, the miserable patient struggles, and makes superhuman efforts up to that point, where, exhausted, in a state of semi-asphyxia, and always under the active influence of the poison, he falls into a condition of complete resolution.

Death sometimes occurs very suddenly; at other times the face becomes livid, the body is covered with a viscous cold sweat. Involuntary evacuations occur; the pulse is small, tremulous, compressible, with subsaltus tendinum, slight thrilling movements in all the muscles, by degrees respiration is impeded, all the functions are arrested insensibly, the patient is quietly extinguished.

Such are the severe cases. When the patient resists, quite frequently he falls into a semi-comatose sleep; the state of resolution in which he lies induces a relaxation of the whole organism; respiration and circulation, although impeded, are gradually reëstablished. Profuse sweats cover the body, and after a variable number of hours, the patient awakens, crushed, sometimes tranquil, at other times preserving a certain degree of excitement, betraying itself by incoherent words, by feeble cries, and by efforts, which his exhaustion renders powerless.

Let us examine now how we may, at the Examining Bureau,

fulfill this first indication, viz., to protect the patient against himself and to prevent deeds of violence to those around him.

I speak to you so much the more freely because the original merit belongs entirely to the administration which, at its first organization, was sufficiently intelligent to place in our hands the means of action necessary to secure good results.

As the alcoholic patient is in a state of extreme agitation we place him in swaddling clothes, which we have substituted for the straight waistcoat. This swathe of cloth, in winter, and of linen in summer, adapts itself exactly to the surface of the body, without exercising pressure upon any point. The arms remain pendant, and are retained in this position by the aid of lateral pockets, into which the hands enter; these are retained by the sleeve itself, fastened in its turn to the portion of the swathe which serves for pantaloons. We employ for women this same form of swathe by adding to it a petticoat.

I will exhibit to you an acute alcoholic subject, excited, and you will see, thanks to the position of the arms, maintained along the sides of the swathe, to be the reverse of what happens with the waistcoat. The greater the agitation the more easily is the respiration accomplished. In some cases the swathe and the presence of a keeper are not sufficient to prevent accidents.

We then place the patient in a large, well ventilated cell, having its wall covered with a thick layer of hair, kept in position by strong sail-cloth, stretched very tight and well varnished upon its exterior surface. Upon the floor are placed two palliasses, placed one upon the other, covering the whole floor, the first extending in a single piece over the whole surface. The second, composed of several pieces, which may be changed as soon as they become soiled.

In the corner is placed a caoutchouc vase. On the floor is a mattress covered with clothes and coverlets, with a bolster and pillow.

The keeper remains before the door, and through a little loophole observes what passes.

This fulfills the first indication; the patient may execute the most disorderly movements, or give way to the most active violence; there is nothing to be feared.

All the functions are regularly performed; and the greater his

activity the more rapidly will the poison be eliminated by the perspiration and respiration.

This leads me to speak of the second indication, to facilitate the elimination of the poison.

At this point we avail ourselves of the knowledge acquired in our physiological studies.

We know that alcohol is not transformed, that it escapes in the state of alcohol, and that the danger will pass away so much the more quickly as the elimination is more rapid and more complete.

Thirst is generally acute; it should be satisfied, by inundating, as it were, the alcoholic patient with aqueous drinks, diluent or slightly aperient. Citric acid, lemonade, tisane of couch grass (chiendent), slightly nitrous, barley water, with a little cream of tartar, are usually used. Under these circumstances, if no complication supervenes, the poison is speedily expelled by the lungs, the kidneys and the skin.

But at this period of effervescence, of nervous hyperæsthesia, succeeds a last phase, of totally different physiognomy, viz., collapse, nervous exhaustion; a state of extreme prostration, from which the patient is extricated with the greatest difficulty.

This condition, which demands consideration, furnishes matter for a third indication,

To build up the strength.

We have recourse to tonics, more particularly to cinchona, and by preference to the extract, which we use largely.

We administer broths, soups, meat essence, and even meat itself, as soon as it can be borne.

And lastly, it is sometimes good to give a little wine.

To epitomize. 1st. Protect the patient; 2nd. Eliminate the poison; 3rd. Support the strength. Such are the symptoms which present themselves ordinarily in acute alcoholism.

Among the simple means of fulfilling these indications, of which I have just spoken to you, you have doubtless remarked that there has been no suggestion of opium, nor of digitalis, nor of chloroform, nor of alcoholic diet, nor of blood-letting, etc.

If the unfortunate results obtained with these different medicaments did not suffice to induce their rejection, what we know at this date, of acute alcoholism, should compel us to proscribe them, absolutely, except with very rare exceptions, which should, of themselves, originate in the presence of complications altogether special.

Editor's Book Table.

A Practical Treatise on the Diseases of Children. By Alfred Vogel, M.D., Professor of Clinical Medicine in the University of Dorpat, Russia. Translated and Edited by H. Raphael, M.D., late House-Surgeon to Bellevue Hospital, Attending Physician to the Eastern Dispensary for the Diseases of Children, etc., etc. From the fourth German edition. Illustrated by Lithographic Plates. New York: D. Appleton & Company, 90, 92, and 94 Grand Street. 1870. Pp. 603. $4.50.

This book passed to its fourth German edition in eight years, and has been translated into all the prominent languages of Europe. The present translation is by permission, and the author kindly forwarded advance sheets of all new matter, or changes, in the last German edition.

In point of literary merit, the translation is a success; the inverted and otherwise idiomatic peculiarities of the original disappearing in a sufficiently transparent English. The name of the eminent publishing house upon the title page, is guarantee, in full, of the fact of its presentation to the American reader in a beautiful and suitable dress.

As a systematic treatise, it is unusually full and complete, as a glance at the table of contents and the very minute and extensive index, will demonstrate.

The first chapter is devoted to Anatamo-Pathological observations upon the infantile organism, discussed under the several heads: A, Respiration and Circulation; B, Secretions; C, Growth. Chapter II., gives General Rules for the Examination of Children — a most excellent *resumé*. Chapter III. treats of the Nursing and Care of Children, and is full of valuable hints and instructions. The remaining chapters are devoted to the consideration of special diseases.

We take unmingled pleasure in noticing that therapeutics, based on bald empiricism, find little place in our author's teachings.

A full account of the pathology, a clear, concise and accurate detail of symptoms, with all the known methods of differential diagnosis, prepare the way for suggestions in treatment of, generally, a satisfactory rational character. Polypharmacy finds little honor herein.

A book worthy our science and the age.

On the Wasting Diseases of Infants and Children. By Eustace Smith, M.D., London, M.R.C.P., Physician Extraordinary to His Majesty the King of the Belgians; Physician to the N. W. London Free Dispensary for Sick Children, and to the Metropolitan Dispensary. Philadelphia: Henry C. Lea. 1870. Pp. 195.

Wasting, which is a sign of defective nutrition, is not always the first sign of a disease which may be detected, and may, even in some of the worst cases of defective nutrition, be entirely concealed from the superficial observer, by fatty degeneration or deposit, œdema, etc. Acute disease may be the starting point, or a great variety of hereditary, constitutional or acquired causes may be at the foundation, which any incidental cause may waken into full activity. This fact is always one of the chief sources of anxiety, pending the presence of intercurrent disorders, not, of themselves, seemingly threatening. *Obsta principiis* — sequela of diseases, not fatal, and from which recovery seems *almost* complete, should be thoroughly studied, lest, peradventure, dormant seeds of diathetic disorders, may have been put in process of germination, or the great organs of nutrition have become involved in lasting error of action. Let not the immediate danger obscure the remote, perhaps the greater. Very many diseases, by their occurrence and progress, give us the clue to the ultimate tendency to death. The "weak point" is disclosed; and the judicious physician, knowing this, may oftentimes so govern his patients' subsequent management of himself that he may, nevertheless, reach even unusual longevity.

As we have elsewhere, and often, insisted, a proper understanding of the action of the human body, and the causes of disease, will hereafter enable us to make use of the latter for the cure of other diseases, and even for securing increased longevity, both to the individual and the race.

After an introductory section (which we wish was more extended) with hints on mode of examination, general therapeutics, etc., the author treats *seriatim* of Simple Atrophy from Insufficient Nourishment, Chronic Diarrhœa, Chronic Vomiting, Rickets, Congenital Syphilis, Worms, Chronic Tuberculosis, Chronic Pulmonary Phthisis, Tuberculization of Glands, and an Addendum, discussing Derangements of the Bowels attendant on Second Dentition.

The diagnosis of each of these disorders is perspicuously made out, and but very little space devoted to pathological considerations. It is evidently a book that aims especially at *practicality*, and hence more attention is paid to formularized treatment than has been usual in these later years.

Numberless formulæ stand out in relief upon its pages. These are characterized by correctness of combination and pleasantness of form, rather than by any novelty. So far as we can judge, they are all of that character that may find occasional use. To younger practitioners, who seek a practical guide whilst learning how to treat the diseases of children, under the lead of wide and more comprehensive views, it will afford an assistance for which they may be temporarily grateful. We trust it may not fasten them to routine treatment, and superficial ideas.

Manual of Hypodermic Medication. By Roberts Bartholow, A.M., M.D., Professor of Materia Medica and Therapeutics in the Medical College of Ohio, etc., etc. Philadelphia: J. B. Lippincott & Co. 1869. Pp. 150.

This is a very convenient little book, embodying the practical experience of its author in hypodermic medication, and referring, in suitable terms, to the contributions of French, German and English authorities, upon the same topic.

The first part treats of the History, Technology and General Therapeutics of the method. The second part gives illustrations of the use of Morphia, Atropia, Strychnia, Conia, Woorara, Nicotia, Hydrocyanic Acid, Physostigma, Caffein, Ergotin, Quinia, Mercury, Arsenic, and Irritant injections.

Plates of the instruments preferred are given, and also those diagrams illustrating the effect upon the pulse, temperature and

respiration of subcutaneous injection of Morphia and Atropia, separately and combined.

For those who wish to make constant or occasional use of this method of securing the usual effects of active and yet concentrated medicines, we cordially recommend this little treatise as the best on the subject.

Pamphlets.

The Pathology of Bright's Disease. By Wm. B. Lewis, M.D., Lecturer on Renal Pathology in the Medical Department of the University of the City of New York; Microscopist of Charity Hospital, etc.; with Illustrations. Published by Turner & Mignard, 109 Nassau Street, New York. Pp. 29. Price, 50 cents.

A valuable contribution, in brief, to the literature of the subject. The writer adopts Virchow's classification of kidney diseases: "An organic lesion affecting primarily the tubes and their lining; another producing at first increase and afterwards contraction of the fibrous stroma; and a third attacking the vascular supply of the parts," but observes: "If we accept a threefold division as the first law of renal pathology, the second is that one of these types of disease may excite another, so that it is not unusual to find two, or, apparently, even all of them coexisting in the same organ." Albuminuria is a broader term than Bright's disease. Renal congestion we are justified in classing (Dr. Wm. Roberts) as a separate morbid state included in the term albuminuria, but not in Bright's disease. The author disagrees with Dr. G. Stewart in his idea of "acute nephritis terminating fatally in the first stage," and gives several detailed cases, with illustrations from microscopic observations. These show the condition to be renal congestion, active or passive, and present no indications of inflammatory action, notwithstanding the presence of albumen, casts and even blood in the urine.

The discrepancy of view, after all, is merely one of definition — Dr. Stewart would include the *active* renal congestion as evidence of existent inflammation in its primary stage.

"The three types of morbid processes properly included in the term Bright's disease are as follows:

"I. Tubal nephritis, also called *acute desquamative nephritis, acute diffuse nephritis, the inflammatory form of Bright's disease, croupous nephritis, and acute Bright's disease.*

"II. Granular degeneration, also called *chronic desquamative nephritis, parenchymatous nephritis, the cirrhotic or contracting form of Bright's disease, the gouty, or the fibroid kidney.*

"III. The waxy, *depurative, amyloid, or lardaceous disease.*

"Authors who make the duration of the malady a basis for classification, include the second and third divisions under the term *chronic Bright's disease.*"

The main features of the three morbid processes classed under the head of Bright's disease are then examined in detail, and the results illustrated by diagrams from microscopic study, and the author concludes:

"We have now examined the main features of the three morbid processes classed under the title Bright's disease. It has been shown that tubal disease is an accompaniment of two forms, and the essence of the other; that in tubal nephritis, disease is confined to the tubes and their epithelium; in granular disease, primarily to the connective tissue, but that subsequently, tubal disease may appear; in waxy degeneration, primarily to the arterioles and capillary tufts, but that as a consequence tubal disturbance often manifests itself. Contraction and a surface covered, as it were, with granulations, are found to be characteristic of advanced granular disease, but appear also in waxy degeneration from similar causes. Fatty degeneration is reduced from the rank of a disease to that of a symptom; consequent upon sustained epithelial disturbance, it appears whenever this condition obtains.

"The 'large white kidney' is a result of tubal nephritis, which in its chronic stage has resolved itself into fatty degeneration. The 'small white kidney' may be a result of either granular or waxy change. Such are the combinations, and the successions generally observed. Waxy infiltration is said, however, to follow occasionally in the train of tubal nephritis.

"In conclusion we may allude to the sometimes difficult matter of determining the original lesion as we examine combined forms of kidney disease. We have seen that Stewart and others constitute a third or contracting stage of tubal nephritis. But such a state of the organs must be brought about by two processes, contraction of the fibrous element, and disease of the tubes. Which of these has caused the other cannot be determined by the microscope alone. It is a question for clinical observation to decide.

"Of itself tubal nephritis is not known to cause, or, in any great proportion of instances, to be followed by hypertrophy of the left ventricle

of the heart, or valvular disease of the same organ, or cirrhosis of the liver. On the other hand these are the commonest attendants of granular disease. Hence, if we meet the combined form above mentioned with such concomitants, it is quite certain that the granular disease is the older lesion. So in waxy degeneration, if a contracted kidney is associated with a considerable infiltration of other organs, known to be liable to such change, it is not difficult to decide that any tubal disturbance discovered must be a result and not a cause of the renal lesion. Again, if it should be questioned whether the contraction of such a kidney were not due to granular degeneration, clinical observation would show that a large liver, a heart almost always free from chronic disease, and the presence of some exhaustive drain upon the blood, conditions not found with the granular kidney, point to a process of disease essentially different.

"In Bright's disease, then, there are included three types of morbid change, but in accordance with certain well-defined laws, these may be variously combined in the same organ."

Nocturnal Enuresis and Incontinence of Urine. By FREDERICK G. SNELLING, M.D. Turner & Mignard, 109 Nassau Street, New York. Pp. 18.

DR. SNELLING calls attention to the "random and slipshod manner" in which these difficulties are usually treated. After indicating a large number of direct and indirect causes, he says:

"It is apparent that diverse as these may be, they can only act by giving rise to one of three prime conditions, viz.:

"Atony or paralysis of the bladder itself, permitting over-distension, and resulting in stillicidium.

"Abnormal irritability and contractility of the bladder sufficient to overcome the resistance of the sphincter.

"Or, atony or paralysis of the sphincter vesica itself.

"These conditions may vary in degree; or in a given case two of the conditions may coexist, as, for example, paralysis of both bladder and sphincter."

After pointing out the sources of nervous supply of the bladder and sphincter, he calls attention to the fact that although sometimes the fear of corporeal punishment or ridicule may often suffice to supply the necessary nervous stimulus to control the difficulty, yet there may be an error of application, for there may be insufficiency of power or actual paralysis "*either of the cerebro-spinal fibres, of the sympathetic systems, or of the muscular* coats of the bladder itself."

Another difficulty is "that the nervous system may become *habituated to inattention*, as also, on the other hand, to *the*

unconscious exercise of voluntary power." These also may be connected with *deficient co-ordinating* power. The voluntary effort to contract the sphincter may result in contraction of the muscular coat of the bladder.

The therapeutical suggestions are quite full. We quote or abstract.

In the very young, after removing all *possible* causes of reflex irritation, he has had much success with:

℞ Tr. Lyttæ, - - - - - - ʒ v;
Tr. Nucis Vomicæ, - - - - - - ʒ iij;
Vini Ferri Dulcis, - - - - - ʒ v;

M. — A half teaspoonful twice or thrice a day to a child five or six years old.

If there be much nervous irritability there may be combined with this a drachm or a drachm and a half of Magendie's solution of morphine; also

℞ Tr. Nucis Vomicæ, - - - - -
Tr. Ferri Acet., - - - - - aa ℥ iij;

M. — 10 or 15 drops to be given after breakfast, and twice during the day.

In these cases the urine does not retain its normal character. It is always more copious than natural, of lower specific gravity, lighter in color, and rarely contains the proper amount of characteristic organic ingredients. In a case presenting these characteristics, arising from inherent feebleness of constitution and highly sensitive nervous system, I have obtained complete relief from the above prescriptions, combined with a tonic —

℞ Syrup of the Hypophosphites, - - - - ℥ v;
Elixir of Yellow Peruv. Bark, - - - - ℥ v;

M. — A teaspoonful twice a day before meals.

These cases generally bear iron well.

The difficulty is more common in girls than boys. They should be urged to exercise the will during the day so as to accustom the bladder to the presence of the urine. Opium, hyoscyamus and conium are the best sedatives in this form of irritable bladder. The combination of cantharides with opium will greatly strengthen the resisting power of the sphincter.

In over-distension and stillicidium from more or less paralysis:

The catheter should be in constant use, and tannin, catechu, ergot, uva ursi, buchu, cubebs, nitrate of potash and opium should be used, combined with the cautious use of the cold douche or shower-bath to the sacrum; or a blister over the same part. The tannic acid acts as a strong

astringent (I am not yet prepared to advocate its injection), the uva ursi as an astringent and exciter of the detrusores urinæ — the ergot exercises a most powerful influence over the unstriped muscular fibre; the buchu is a most efficient stimulant to the bladder, as well as a diuretic; the cubebs is a stimulating tonic with an especial tendency to the urinary mucous membranes; the nitrate of potash acts upon the internal coats of the bladder by rendering the urine more acid and stimulating; and opium has the most marked and singular effect of contracting the bladder and diminishing its calibre, of decreasing the secretion of urine, and of producing a tonic contraction of the sphincter vesicæ. These remedies may be used singly and in various combinations. An excellent one is —

℞ Elixir Aromat. Secalis, - - - - - ℥ ss;
Tr. Uva Ursi, - - - - - - ℥ ss;
Tr. Buchu, - - - - - - - ℥ vi;
Ess. Pyrolæ, - - - - - - ʒ ij;
Syrup Zingiberis, - - - - - - ℥ j;

M. — Half or one teaspoonful three times a day for an adult.

Were the action of the haschisch or cannabis indica more certain, I would recommend it in combination — but it may be used alone in doses of from fifteen to forty minims, carefully watched. Another efficacious combination is —

℞ Nitrate of Potash, - - - - - gr. x;
Tannin, - - - - - - gr. ij;

M. — Pro dose. To be taken three times a day in simple syrup or solution.

Strychnine has been injected into the bladder with success in the proportion of 1 part to 1,000 parts of water.

Cases of renal calculus, or other diseases of the kidney, diseases of the uterus, vagina, rectum, prostate, etc., etc., require each their special treatment, of course, but about all of them will be more or less relieved by the exhibition of bland mucilaginous drinks, rest, the application of strong tinct. aconite over the pubes, and the careful avoidance of all the causes of increased acidity or other irritating properties of the urine.

Small doses of belladonna have a well-known power of allaying spasm and irritability.

In those cases, lastly, dependent on atony or paralysis of the sphincter vesicæ, the sheet anchor of treatment will be strychnine or nux vomica, variously combined with the tincture of cantharides, opium, morphine, or cannabis indica, iron and the vegetable tonics, as, for instance —

℞ Ext. Nucis Vomicæ, - - - - - gr. viij;
Oxydi Ferri Nigri, - - - - - ʒ j;
Pulv. Quassiæ, - - - - - - ʒ j;
Syr. Absinthe, - - - - - - q.s;

M. — Ft. massa et in pil xlviij divide. One pill to be taken three times a day.

With this may be given also any one of the many so-called ferrated elixirs of bark. They are all of them mild and excellent tonics for children. If there be much nervous disturbance with it —

℞ Tr. Cantharidis, - - - - - - ℥ ss;
Tr. Hyosciami, - - - - - - ℥ ij;

M. — A half teaspoonful twice or thrice a day.

A blister to the sacrum will also sometimes have the most marked effect.

If there be also a condition of morbid irritability of the neck —

℞ Ext. Belladonna, - - - - - gr. iij;
Ext. Nucis Vomicæ, - - - - gr. ivss;
Phos. Acid. Dil., - - - - - ℥ j;

M. — Fifteen drops three times a day.

If from a difficult labor, causing paralysis of the bladder or sphincter vesicæ, from pressure —

℞ Ergot of Rye (Elixir Aromat.) - - - - ℥ iij;
Tr. Nucis Vom., - - - - - ℥ j;
Phos. Acid Dil. - - - - - - ℥ j;

M. — Fifteen drops three times a day.

Or —

℞ Strychniæ, - - - - - - gr. j;
Tr. Ferri sesqui-chlor., - - - - - ℥ ij;
Balsam Copaib., - - - - - ℥ j;
Infus. quassiæ, - - - - - - ℥ xij;

M. — Dose, an ounce three times a day.

Tannin may also be given in one-grain doses, in substance night and morning.

An excellent combination is —

℞ Fl. Ext. Cubebæ, - - - - - ℥ ij;
Fl. Ext. Buchu, - - - - - - ℥ iv;
Ess. Gaultheriæ, - - - - - q. s.;

M. — Fifteen to thirty drops every two or four hours.

The balsams have also been recommended by Mr. Chabrely, as, for instance —

℞ Styrax Balsam, - - - - - - ℥ iss;
Peruv. Balsam, - - - - - - ℥ iss;
Honey, - - - - - - - ℥ ij;
Pulv. Gum Acac, - - - - - - q. s.

M. — To make an electuary — a teaspoonful night and morning.

Or —

℞ Styrax Balsam, - - - - - - ℥ iss;
Balsam Tolu, - - - - - - ℥ ij;

M. — Ft. massa et div. in pil aa gr. v. to be silvered. Four to eight pills a day.

Benzoic acid has also been used with benefit in doses of three grains in pill, two or three times a day. Combined with the tonics, wine should be given, in small quantities, daily.

If these methods fail, electricity may be tried. A *jugum* never, but recourse may be had to a plan (first recommended, I think, by Sir Benj. Brodie, and quoted by Gross,) of tying under the penis, along the urethra, a piece of flexible catheter by adhesive straps applied from the glans toward the pubes, and to be removed and replaced when the patient urinates.

Zinc ointment and glycerine are the best local applications to allay and soothe the excoriation produced by the dribbling urine.

We regret that the author in his valuable and instructive paper has not referred more at large to the great number of cases which are readily relieved by the mineral acids. The old-fashioned muriated tincture of iron has cured more cases, "taken as they come," than any other one remedy. The liquor ferri per nitrat. is also very efficient. The latter, combined with tinct. cantharid., we have seen cure very many cases.

The reaction, specific gravity, etc., of the urine, should always be tested in these cases. It is rarely abnormally acid in children with this trouble, but if it is so, either in them or adults, the bromide of potassium will add to its laurels in use.

In cases involving want of contractility of the sphincter, the following formula, published in the *American Journal of Medical Science*, many years since, will often promptly control:

℞ Veratriæ, - - - - - -
Morph. Sulph., - - - - - - aa gr. x;
Cerat. Simp., - - - - - ℥j;
M. — Ft. ungt.
S. — Apply cautiously over the perineal region, or above the pubis, once or twice a day.

Local cauterization of the urethra will cure some cases.

Suppositors, deftly prepared, will cure others.

It is an exceedingly "nasty," and oftentimes obstinate trouble, and we thank Dr. Snelling for recalling professional attention to its causes and treatment.

The Physiological Action and Therapeutic Uses of the Acidum Phosphoricum Dilutum. By JUDSON B. ANDREWS, M.D., Assistant Physician in the New York State Lunatic Asylum. Read before the Oneida County Medical Society. 1869. Pp. 17.

AFTER discussing the supposed material relations of this acid to the nervous tissue ("chemical food"), Dr. Andrews gives the usual sphygmographic drawings, illustrative of its effects upon the pulse. He then details several cases wherein its efficiency as a nerve tonic and stimulant seemed quite apparent.

We append, as giving the gist of the matter, the concluding pages of the monograph:

"Cases are sometimes under treatment at the Asylum, and more frequently in private practice, especially from among literary, professional or business men, which are characterized by loss of mental power from excessive brain activity.

"The patient is languid, unable to perform mental labor with the usual facility, is nervous, at times fearful, timid and agitated; the memory is weakened, and permanent impairment seriously threatened. Examination reveals no organic lesion, but the symptoms are such as justly occasion alarm. Such cases have been improperly called by some recent writers cases of cerebral paresis, a term too strong in its import, but expressive of the great danger which impends. For the recovery of these cases, relaxation from business and labor, and the use of the phosphoric acid, combined with some suitable tonic, generally suffices.

"In cases where mental effort has been protracted till a sense of weariness renders its continuance difficult, a dose of the acid, from its stimulant effect, relieves fatigue and seems to invigorate the mental powers, and prepare the mind for renewed exertion.* In the night sweats attending consumption, and other exhausting diseases, this acid is employed with benefit, and has some advantages over the aromatic sulphuric acid, so generally used. It is much more agreeable to the taste, more likely to be tolerated, and does not constipate the bowels. The anti-scorbutic power of this acid is well settled. A marked case of purpura occurred in the Asylum recently. The patient had been an inmate for several months, and though eating the ordinary diet of the house, in which vegetables are

* A professor in one of our Medical Schools, in a letter to Dr. Gray, recently remarked: "Wonderful thing that phosphoric acid, and well named by me psychological lemonade. My lunch at noon (we dine at six) consists of rich cheese, bread, and a glass of phosphoric acid lemonade, and on that I have worked eight and nine hours a day, with my pen, for the past seven weeks in this hot weather, without headache or any depression. I never take over fifteen drops, and only once a day, and when fatigued. It is wonderful how quick it climbs into the anterior lobes, scatters capillary congestion, and satisfies the hungry tissue with its own pabulum."

bountifully supplied, became scorbutic. The gums were red and spongy; there was lassitude, soreness of the muscles, and an eruption presenting the forms of petechiæ and vibices upon the anterior of the chest and the inner surface of the thighs.

"The patient was given the acid in half drachm doses, and in two weeks entirely recovered. In cases of anæmia and chlorosis, in both of which there is a depressed condition of the nervous system, phosphoric acid in combination with ferruginous tonics, has been found especially efficacious.

"At the Asylum, as an adjuvant for the solution of quinia in water, phosphoric acid is now substituted for the sulphuric acid, with the advantage of increasing the tonic properties of the solution. In giving quinia, we have in cases marked by great nervous prostration, and accompanied with profuse perspiration, found this acid in half drachm doses a valuable addition, and one that seems to increase the power of the alkaloid. To the ordinary elixirs, tinctures and decoctions of bark, the acid forms an important aid, and by its acidity it overcomes to a great degree the unpleasant taste of the vegetable bitters.

"Observation here confirms the views of Nelligan and others, that this substance exerts no direct influence on the generative function. It has thus been employed on theoretic grounds; but any favorable influence it has exerted has probably been owing to its general tonic effect. We have used it extensively, and in cases where this function was abnormally excited; and in no instance has its administration been suspended from this cause, or has any inconvenience resulted from its use.

"Phosphorus in substance is now recommended in many of the Journals, in some forms of paralysis, in locomotor ataxy, and in other of the neuroses. It is an element difficult to dispense and dangerous to administer. In the stomach it is converted largely into phosphoric acid. It is from this change taking place in the stomach, that the danger is to be apprehended. Is it not better to employ the acid, which in proper doses is harmless, than to incur the risk of consequences in giving phosphorus in substance?

"In the administration of this remedy, one general principle should be kept in mind, viz.: not to exhibit it in cases of congestion of the brain, or in those in which there is an inflammatory action, either in the nerve substance or the meninges, as its stimulant effect might prove an aggravation to existing disease. In no case in which it has been given, has it disturbed digestion or proved an irritant to the stomach, even when its administration has been prolonged.

"When the remedy was first employed at the Asylum, the dose was ten drops three times a day; this has been gradually increased till now the standard dose is a half drachm. This is given in water alone, or with simple syrup, with which it makes a pleasant and agreeable lemonade. The large doses spoken of were thus taken. In the various combinations with other remedies, the dose varies from 10 to 20 drops. A favorite tonic

remedy, which makes an eligible preparation, and one very palatable, is as follows:

℞	Acidi Phosphorici Dil.,	one oz.
	Elix. Calisay.,	four oz.
	Elix. Valer Ammon.,	two oz.
	Glycerinæ,	three oz.
	Sherry Wine,	six oz.

Dose, from one-half to one oz.

It is from an experience in the use of this remedy in more than two hundred cases, extending over a period of several years, that confidence has been inspired in its general adaptation to the treatment of diseases marked by debility of the nervous system.

Memoir of Robley Dunglison, M.D., LL.D. Read before the College of Physicians at a special meeting held October 20, 1869. By S. D. Gross, M.D., LL.D. Philadelphia. 1869.

Biographical Sketch of the late A. B. Shipman, M.D., of Syracuse, N. Y. Read before the Onondaga Medical Society. By H. O. Jewett, M.D., Cortland, N. Y. Albany. 1869.

Earnest, eloquent and worthy tributes to medical men whose names the profession "will not willingly let die."

Aiken; or, Climate Cure. By Amory Coffin, M.D., and W. H. Geddings, M.D. Charleston, S. C. Pp. 58.

This pamphlet is sent forth with the avowed purpose of convincing the reader that the climate of Aiken is peculiarly advantageous, in a sanitary point of view, as a resort for Northern invalids during the winter months. Its reputation in this respect was steadily increasing up to the commencement of the war, when, of course, "circumstances prevented."

The authors do not confine themselves to bare assertions or cataloguing instances of cure or relief, but bring forward carefully prepared meteorological tables, which include a period of eight years. Without going into detail here, we quote the statement:

"The atmosphere is so dry that surgical and other instruments, guns, etc., which require so much care in other places to prevent their rusting, may be exposed here for months without sustaining damage."

Wells have to be dug from 90 to 150 feet. The soil is porous, and the heaviest rain dries off in a few hours. "Fogs are extremely rare, and the Epiphyte Tillandsia, or tree moss, that unfailing indicator of moisture and malaria, which so gracefully festoons the live oaks of the low country, is entirely absent."

The mean annual temperature is 61° 69. The mean temperature of the colder six months of the year is 51° 53.

This is about as favorable an exhibit as can be given by the most vaunted resorts in Europe—Nice, Palermo, Pau, Venice, Pisa, etc.

The winds are mainly from the southwest, and very moderate. Southeast winds are rare. From the combination of dryness, mild temperature and freedom from injurious winds, the patient, it is claimed, can pass the greater portion of his time in the open air, and *scarcely know what confinement indoors means.* In the 55 days prior to writing there were only three when he could not have been out of doors enjoying the bright, warm sunshine and balmy air.

The *elevation* is only 600 feet above the sea level—the advantage of this in cases where there is a tendency to hæmorrhage is obvious. Practically, it is asserted, the climate proves itself tonic and bracing, rapidly promoting convalescence from tedious diseases, and peculiarly beneficial in phthisical cases. Its tonic influences can not be experienced in the mild but debilitating climate of Florida or Cuba.

Aiken is a town of about 1,300 inhabitants, 120 miles northwesterly from Charleston, accessible by rail. It is but 17 miles from Augusta, with which the same railroad connects it.

We have devoted some space to this pamphlet, because we of this section need some accessible point where we can send patients into a climate possessing exactly the peculiarities claimed for Aiken, South Carolina.

Comparison of the Mortality from Disease in Armies with that of Men of Military Ages in Civil Life, showing the Groups of Diseases chiefly concerned in Causing the Excess of Mortality in Armies. By A. NEWMAN, M.D., Lawrence, Kansas. Leavenworth. 1869. Pp. 39.

A large amount of valuable and instructive matter has herein been industriously collected by the author, but it has come to hand too late for analysis at present. We regret that competent medical men should seek the limited and temporary circulation afforded by the monograph, rather than the wide diffusion and permanent preservation afforded by the leading medical journals.

Editorial.

A Word About Hospitals.

WE see by the daily press that Cook County Hospital is crowded with patients, and for a long time we have known that the deficient space allotted to the sick of the city and county has been guarded by "red tape," to a degree that has rendered admission to its privileges, practically, a matter of extreme difficulty.

A man, wounded and friendless, picked up in the street by the police, stands a better chance of dying in the station house or the Armory than of finding lodging and care in the county castle of Hygeia.

No blame is herein intended for the efficient medical and surgical staff which attend at the county building.

The city and county are deeply in debt. The erection of the new and expensive wings of the Court House, the new Bridewell, Normal School building, etc., etc., tax, already, the abilities of the people, and the financial skill of the powers that be, to an extent that causes them to shrink from the attempt to provide new and capacious hospitals. Yet, this latter is an imperious necessity.

There is scarcely a city on the continent, or throughout Christendom, where there is so little provision for the sick poor. Private effort will vainly attempt to supply the want.

Chicago *must* have increased hospital accommodations. This is a fact too patent, too palpable, to need argument; and being assumed, we beg leave to submit to the profession and the community, that the want can easily and satisfactorily be filled.

For hospitals, the main demand is space — plenty of land and no more brick or stone castles. There is not, in this age of the world, a more unpardonable anachronism than the vast architectural monstrosities which every where, almost, in the cities, are piled up and labeled hospitals.

Let us have no more of them. Spend all the spare money for land — there is plenty of it on sale in the county — and then put up cheap buildings, constructed in accordance with modern ideas of hospital proprieties.

Plain wooden structures, not over two stories in height, with no cellars or foundations, save the necessary piers of support. No one roof to cover more than twenty-five, or, at the utmost, fifty beds. Long, narrow — with windows upon both sides in abundance — with the wind blowing under, and around, and over them.

We insist, the wooden barracks employed as hospital wards in the late war, were infinitely preferable to the masses of brick, stone and mortar, built for all time, labeled hospitals, but which are rather charnel houses.

Put up the buildings cheaply enough so that should they become pestilential, notwithstanding judicious care, they may be pulled down or burned up, with no one to lament the waste.

The war experience has taught civilians much in this matter, and we had thought the day of castellated hospitals had gone by. But it would seem that the authorities still think they must adhere to the deplorable uses of antiquity.

Let us have no more "Guy's" — not even any more wings or "lean-tos" to the present Cook County Hospital. Better pull that down, or sell it for a brewery, and have something in accordance with the teachings of modern science.

Let us have no more strangers, or even vagrants, dying in the Armory, Bridewell or station houses, because there is no room for the sick or wounded poor in the hospitals of this great city of Chicago.

Rush Medical College.

The Annual Commencement exercises occur on Wednesday evening, February 2nd, at the lower lecture room of the College.

The third Annual Reunion of the Alumni Association of Rush Medical College will occur on Commencement day, Feb. 2. The meeting will convene in the lecture-room of the College, at 10 A.M. The annual address will be given by Dr. Ames, president of the Association.

Diplomas will be conferred on an unusually large class.

Portrait of Prof. Gross.

We are indebted to the enterprising Editor of the Philadelphia *Reporter*, for a finely-executed engraved likeness of the veteran surgeon and teacher, Prof. S. D. Gross. Subscribers to the *Reporter* will find it in the second January number, and *artist's proofs* may be obtained, at $1.00 each, by addressing S. W. Butler, M.D., 115 South Seventh Street, Philadelphia.

Responsibility.

It is, perhaps, unnecessary to say to the majority of readers that the Editors do not hold themselves responsible for the opinions of correspondents. All that we require of them is, matter of professional interest, written in *good faith*.

All Book Notices, Editorials, etc., the Senior Editor assumes personal responsibility for, unless the authorship is otherwise indicated by name or initial.

Relieved entirely from the cares of publication, we commence the new year with renewed zeal and determination to maintain the Journal in the front rank of medical periodical literature.

Ingratitude.

Sometime since, we took occasion to compliment, in warm terms, a very prettily got up compilation (elegantly illustrated) of metters connected with the Hip-Joint and its Dislocations. But it appears, because we took the liberty to call the author's attention to a single glaring instance of failure to give appropriate credit, he has insinuated that we had not read his book.

He should recollect what Sydney Smith said — never read a book before reviewing it, as reading it is apt to *prejudice* you.

Unfortunately, we did read the book referred to, sufficiently to ascertain its real merits, and have nothing to take back or add to what we have written.

Caution.

All persons indebted to the Journal, for past subscriptions or advertisements, are cautioned against paying any money to any person therefor except to the undersigned, or his order. The last volume of the Journal came very near to grief, under its then publisher, and the undersigned is making every effort to repair the damages thus sustained. J. Adams Allen.

OBITUARY.

Died — At Davis, Stephenson Co., Ills., on the 7th of October ult., Dr. J. R. Hamill. The deceased was born in Baldwinsville, Onondaga Co., N. Y., March 1, 1828. Read medicine with his brother, A. P. Hamill, and graduated at Geneva. He moved to Stephenson Co. in the year of 1856, and located at Davis, where he was engaged in the practice of his profession until within one week of his death.

Autopsy revealed the cause of his death to be acute inflammation, affecting, principally, the peritoneum duodenum and biliary ducts, caused by biliary obstruction. A large number of gall-stone were found impacted in the common duct, confirming the diagnosis of his attending physicians.

At a special meeting of the Stephenson Co. Medical Society, Oct. 11, 1869, convened for the purpose of taking appropriate action on the death of J. R. Hamill of Davis, the following preamble and resolutions were adopted.

Whereas, It has pleased Almighty God, suddenly to remove from among us Dr. J. R. Hamill, in the vigor of his manhood and in the midst of a career of usefulness;

Resolved, That while we bow with humble submission to the will of Him who doeth all things well, we mourn with sincere and heartfelt sorrow the untimely death of a beloved and honored associate.

Resolved, That in our deep affliction, we refer with melancholy pride to the many excellent qualities of mind, and heart of Dr. Hamill, which rendered him a welcome and trustworthy counselor to his professional associates, and a valued friend and adviser to the sick and afflicted. As a physician he was gifted with swift and unerring judgment, rich and varied attainments, deep sympathy for the afflicted, and a profound knowledge of the resources of our art. Untiring in the discharge of his professional duties, he was alike ready to obey the summons of the rich and the distressed calls of the poor and needy. Firm in his convictions, self-reliant, and tenacious of his opinions, he was nevertheless always mindful of the rights and feelings of others. As a man he was generous and just; as a physician zealous and intelligent; as a husband and father, kind and indulgent.

Resolved, That in his death our Society has lost an earnest and valuable member, and our profession an honored and devoted associate.

Resolved, That as fellow-sufferers we tender our sincere sympathies to the afflicted wife and children of the deceased.

Resolved, That a copy of these resolutions be inscribed on the records of this society, and that copies be transmitted to the papers of Stephenson County, and to the Chicago Medical Journal, for publication. B. T. Buckly, President.

Louis Stoskopf, Secretary

THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery, and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.; AND WALTER HAY, M.D.

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Original Communications.

ARTICLE I. — *On the Origin, History, and Treatment of Trichina Spiralis.**

IN conformity to a usage established long ere this, I am before you, to-day, as your retiring presiding officer for the year just passed; and I beg your attention for a few moments, while I introduce some remarks upon the origin, history and treatment of a disease of which there is but little written and comparatively less known, in this our country, by the medical profession generally.

The disease to which I allude was nosologically arranged by Dr. Zenker, in 1860, is of parasitic origin, and has been called, by its discoverer, trichiniasis, from the name of the entozone producing it, the trichina spiralis. The generic portion of the name of this animal is derived from a Greek word, meaning or referring to a hair, in allusion to its filliform shape; the specific part, spiralis, from the Latin word spiralis, indicating the spiral watch-spring-like form which it assumes when curled within its cyst.

The trichina may very properly be described as a small, slim worm, measuring at adult age from $\frac{1}{60}$ to $\frac{1}{30}$ of an inch in length,

* A paper read before the Fox River Valley Med. Association, and published by request.

and from $\frac{1}{150}$ to $\frac{1}{100}$ of an inch thick, semi-transparent, with an attenuated end, which we shall describe as its head, the other or anal end being blunt.

When at rest, they usually assume a coiled form, but, when moving through the muscular tissue, their motion is spiral or cork-screw-like, with the attenuated end foremost, and are very active in their movements. From the mouth runs a tube to a sack, and from this runs a straight tube to the blunt end or anus. These seem to answer the threefold office of œsophagus, stomach, and intestine.

The females are much larger than the males. The ovaria and eggs of the females are inclosed in a long-tube lying alongside of the intestinal canal, and decreasing in size as it runs forward, and opening out at the beginning of the anterior third of the body.

The trichini, when found in its adult state, is usually inclosed in a thin, transparent capsule, lying between the sarcolemma of the primitive muscular fibre. This capsule, in process of time, frequently becomes calcareous, and in this rests the parasite for an indefinite space of time, unless sooner freed by entering the stomach of some living animal.

They are reproduced viviparously, and Virchow describes them as a bisexual parasite, he having found mature trichina, of both sexes, moving freely in the mucus of the intestines.

The first discovery of these little parasites was by Tiedeman, in 1822. Hilton, in 1832, found the pectoral muscles of an old man who died of cancer, thickly sown with minute white specks; an account of which he published in 1835 in the *London Medical Gazette*, and consequently was the first to put on record a description of what subsequently proved to be the cysts of trichina.

In 1833, James Paget, then a student at St. Bartholomew's, found what was supposed to be minute bony spicula, in dissecting a body, but on examining them with a microscope, he found each to be a cyst containing a small worm. As soon as he made known his discovery, portions of the muscles were distributed to various anatomists, and among others to Robert Owen.

In the same year, Professor Owen presented to the Zoölogical Society his memoir, containing a microscopic description of the entizone infesting the muscles of the human body; in which he

describes the worm as destitute of intestinal canal and organs of generation, and classed them in a very inferior scale among the helminthes. In the same year, Dr. Farre discovered an intestinal tube and organs of generation, which placed the worm in a higher scale of organization, and enabled him to assign it a place among the class nematodes.

In the same year, or 1835, Henry Wood, of Bristol, gave to the *London Medical Gazette* the history of a case, which he diagnosed as an attack of acute rheumatism, complicated with cough and dyspnœa. The patient was a young man, aged 22 ; had been sick fourteen days, the last six of which he was confined to his bed ; at which time he was admitted to the Bristol Infirmary, and died the tenth day after admission, or the twenty-fourth day from attack.

Autopsy exhibited pneumonia, extensive pericarditis, and trichina in the muscles of the chest und shoulders in great numbers. The trichina were not yet encysted.

In the same year, Dr. Harrison reported six cases of trichiniasis to the *Dublin Journal.*

In 1840, Kobett and Bischoff published an account of an autopsy made at Heidelberg, of a body infested with trichina. Bischoff and Farre mistook the attenuated end of the worm for its tail, in their description of it, and consequently described the mouth as the anus.

From 1842 to 1845, observations were published in this country, by Drs. Bowditch and Wyman, of Boston, and by Mouster and Soytzer, of Copenhagen, in Denmark.

In 1851, Suschka pointed out the attenuated filliform portion of the parasite as its head, and Leuckart, Bristowe and Rainey observed and demonstrated the genital organs, with other minute points of their anatomy.

In 1855, Zenker, Leuckart and Kuckinmeister experimented upon different animals, by feeding them trichinosed human flesh. Leuckart's observations were mostly made upon the dog, an animal not susceptible of trichinose infection ; nevertheless he demonstrated the fact of the freeing of the trichina from their capsules, and their development to three times their primitive length, within three or four days after being taken into the stomach and intestines. He also established the fact that the worm would

readily undergo gestation, and give birth to living young, even in the stomach and intestines of the dog.

The experiments of Leuckart fully demonstrated the fact that the young trichina commence their migration from the intestine towards the muscles, as soon as they were developed; which was proved to be about the eighth day after the food was ingested, and that, in the intestines of the hog, cat, rabbit, mouse, and domestic fowl, trichina would attain their full and complete sexual development.

Pagenstrucher and Fuchs devoted many months to artificial trichinization of various animals, viz.: Mammifers, birds, cold-blooded animals, fishes, molusks, and insects. Of the mammifers, the dog was the first subject. They found, as did Leuckart and Virchow, that trichina would propagate in the dog, but would not penetrate the intestines and enter the muscles. They found that the hog, wild-boar, guinea-pig, coney, hare, cat, rat, mouse, and mole were easily infected; while in the bull, ox and cow, the trichina would propagate, but, as in the dog, would not enter the muscle. The calf, goat, sheep, stag, and roebuck were moderately susceptible, and that badgers and martins remained doubtful.

The birds experimented upon were the goose, turkey, cock, hen, pigeon, starling, crow, jackdaw, jay, peacock and turkey-buzzard.

Although they found the parasite would become sexual and increase in them, yet they found them expelled by the alvine evacuations, and in the magpies no traces of trichina could be found four days after eating the meat. In the carp, frog, salamander, crab and flesh flies, the trichina were not developed at all. In the ducticus marginalis of the beetle family, trichina were found in the stomach alive five days after eating trichinosed meat. The observations of Pagenstecher and Fuchs are not fully confirmed by subsequent observations; for recently, in New York, Dr. Percy has reported a case in which a family were trichinosed by eating beef, and trichina were subsequently found in the beef.

Simon also cites two cases of persons having been trichinosed by eating beef in the epidemic of Calbe, and Kupprecht reports two cases at Hettstadt, and six in the epidemic at Leipsic, from eating raw beef.

If my memory serves me, Owen mentions having found trichina in oxen and pigeons that were fed on trichinose meat; the trichina were found in the neck, wing and thighs of the pigeons, eighteen days after feeding, thus showing pretty conclusively that the trichina will pass alive the ordeal (as a writer calls it) of the gizzard of the fowl, although by him denied.

It appears to be a well settled fact that many, if not all, of the ruminating animals are subject to become trichinosed if fed on food containing the parasite, but we should not expect them as good subjects as many other animals, from the fact of their stomachs containing usually a large amount of vegetable matter, in which the trichina might become intermixed, and consequently pass with the alvine evacuations without ever reaching the mucous membrane of the stomach.

In the case reported by Dr. Percy, of New York, it appears the animal was fed at a distillery — food, in our judgment, very proper to convey the trichina to the mucous membrane of the stomach of the animal, and also very favorable for the development of the sexual organs of the parasite.

Of the other cases reported of the trichina in beef, we have no means at present of knowing how the animals were fed.

In our description here given from the various authors, we are unable to trace the known origin of the trichina fifty years back.

Now, can we for a moment harbor the opinion that this little parasite has sprung into existence within the last fifty years. True, we have no authentic history of their existence for a longer time; but does this prove that they did not exist.

Until recently, we have been taught by geologists that there were no visible signs of animal existence below the lower silurian formation of rock; but recent discoveries in Canada have found the rizopods in the Laurentian formation some 30,000 feet below the lower silurian, the fact of their not having been discovered before, it would seem was no evidence of their non-existence. So we think it is with the trichina.

We have seen it stated, that Herod of old, the man-slayer and baby-killer, who died soon after the birth of Christ, died of trichiniasis.

The author making this assertion, cites Josephus as evidence of his position. In Josephus history, sixth chapter and fifth section, in

speaking of Herod's disease, he says: "A fire glowed in him slowly, which did not so much appear to the touch outwardly as it augmented his pains inwardly; for it brought upon him a vehement appetite to eating, which he could not avoid to supply with one sort of food or other. His entrails were also exulcerated, and the chief violence of his pains lay in his colon; an aqueous and transparent liquor also had settled itself about his feet, and a like matter afflicted him at the bottom of his belly. Nay, further, his privy member was putrified, and produced worms; and when he sat upright, he had a difficulty of breathing which was very loathsome, on account of the stench of his breath and the quickness of its returns; he had also convulsions in all parts of his body, which increased his strength to an insufferable degree."

In this account of Herod's disease, given by Josephus, we find but very few, if any, symptoms which would lead us to believe his disease was that of trichiniasis. We would far sooner believe that he was troubled with a disease which attacks men in this day and age, even in our own country, who visit certain places where honest men ought not to go. At such places, they sometimes contract a disease which, if allowed to run, may cause their privy member to putrify and produce worms similar to those of Herod's, but not trichina.

Now, suppose Herod's system was infected with trichina, the worms found on his privy member were no evidence of the existence of that parasite.

The medical fraternity of that day and age had no means of seeing or detecting the parasite, as they could not be seen then any better than now, without the aid of lens; and the ancients of Herod's time had no such lens.

The first lens of which we have any account were made of rock crystals (probably quartz), in A.D. 50, and were found by Layard, in the palace of Nimrod. The microscope was not invented until the seventeenth century, consequently no such power could have been used, to detect trichina, in the days of Herod. Nevertheless we have reason for believing that trichina existed long before Herod's time.

In the eleventh chapter of Leviticus, the Lord spake unto Moses and Aaron, saying: "Speak to the children of Israel, that these are the beasts of which ye shall not eat, viz., camel, coney, hare and swine, because they are unclean."

This order was given to Moses and Aaron, in the year of the world 1490, or 2514 years before Christ; and it is remarkable that it should have included three of the most susceptible animals to the influence of the trichina yet known. And it is not wholly clear but what the first named (the camel) may yet prove to be easily trichinized.

Now, may not trichina have been the cause of this order then given to the Israelites, they being a people whom God took special care to look after and provide for, if we believe the account given of them in Holy Writ.

Genesis, first chapter and twenty-fifth verse, reads: "And God made the beast of the earth after his kind, and the cattle after their kind, and every thing that creepeth upon the earth after his kind; and God saw that it was good."

It appears that on the sixth day, God created every thing that creepeth upon the earth. Now, assuming this to be so, and also the fact that we have no account of any living being having been created since that day, have we not good reason for believing that the trichina was created at that time, although not discovered by man until the commencement of the nineteenth century.

Of their natural sphere and abiding place, as yet, we know nothing certain; but of their accidental appearance in man, and many of the lower class of animals, we have conclusive evidence; and that they will live for a succession of years in the muscular tissue of man, and many of the lower animals, when properly inclosed in their capsules, we have no doubt.

Scoutetten cites a case where the muscles of a subject who had been infected thirteen years previously, promptly developed and gave forth young upon being swallowed by a rabbit.

Virchow gives a case in which living trichina, within calcareous capsules, were found in a patient who had been trichinosed twenty-four years previously. Although this would seem to show that they are quite at home in the muscular tissue of man, yet we are constrained to say, as before, that they are here only by accident, and that neither man nor the swine are the natural abiding place of these little parasites. They are rarely found in either, and would, in all probability, become extinct if they depended upon either for their existence. Notwithstanding, they will readily propagate when introduced into the stomach of either.

Many cases of disease, produced by eating raw trichinosed meat, are reported in Germany, and among those most noted are the following:

At Plauen there were 40 cases, and one death; Magdeburg, Newstadt and Buckaw, about 400, with no deaths reported; Blankenbourg, 78, with one death; Calbe, 38, and eight deaths; Hettstadt, 159, with 28 deaths; and at Hedersleben, 350 cases, with 80 deaths; making, in those few epidemics, one thousand and sixty-five cases, with one hundred and eighteen deaths, or one death in nine and a fraction over.

As among the cases occurring in this country, we would cite the following:

That of a German family, reported by Dr. Schnetter, of New York city, in 1867, in which a whole family were affected, one of whom died. They had been eating raw ham, which, on a microscopic examination, was found to contain trichina. Dr. Voss also reports three cases on board of a Bremen ship lying in New York harbor. To satisfy himself of the existence of trichina, he harpooned the deltoid muscle of the mate, in which trichina was found, and an estimate made of about 7,000 to the cubic inch.

Dr. Lathrop, of Buffalo, has reported a case, and Dr. Horr, of Dubuque, Iowa, has reported six cases, as occurring in Mane township, in 1866 — that of three boys and three girls, who, on the 22nd of April, took a lunch of sandwiches, in the construction of which raw smoked ham was used. Two days after, all but one of them were attacked with diarrhœa, developing into all the symptoms of trichiniasis. Effective cathartics were given at once, which, doubtless, expelled the greater portion of the worms before they had time to multiply fatally. One subject, a girl of sixteen years, exhibited the symptoms in reversed order — lameness of the muscles on the second, and the diarrhœa on the third day. She was more severely ill than the others; had inflammation of the lungs and hoarseness of the voice; and, on the 19th of June, was hardly able to walk. No cathartic was given to her, as to the others. Dr. Horr also reports nine cases in Marion, in the family of Mr. Bemis; they were all taken ill about the first of May, after eating freely, at several times, of raw smoked ham, from four to ten days previously. Mr. Lansing ate freely from

the same ham, well cooked, and showed no symptoms of the disease. The symptoms of this disease as shown in these cases, were, diarrhœa on the second day; pain, soreness, and debility of the muscles of the limbs, on the third day, with swelling of the face; followed, on the fourth and fifth days, by swelling of the hands, then of the feet and legs, with fever of a low grade, quick pulse, furred tongue, and sleeplessness. The muscular soreness and pain, with fever thirst, tenderness of the abdomen, and profuse sweating, continued as the main symptoms, until death, in the second or third week, or convalescence, slowly established, in from four to eight weeks. Two of the fatal cases had serious pneumonic complication. Five of these nine cases proved fatal: A little boy, June 1; H. B. on the 3rd; a child on the 8th; Mr. B. on the 15th; and Mrs. B. on the 17th. Examination after death, on two of the bodies, showed the parasite in the muscles, estimated by others, and myself, at about 200,000 per cubic inch. Some were also found in the lungs and spleen. We have given the above cases reported by Dr. Horr almost verbatim, for the purpose of comparing the symptoms with those of which we are now about to report, of the family of Mr. T. W. Tefft, of Elgin township:

On or about the 18th of February, 1869, Mr. T. was taken with a diarrhœa, and was not able to be at his work, but did not think himself sick enough to call a physician. The bowel complaint continued about the same until the first of March, at which time it became much augmented; and at this time two of his children were taken sick, and a day or two subsequently his wife was taken.

Being absent from home, we did not see the cases until March 11, at which time we learned that, when first taken, the three last cases were slightly sick at the stomach, but did not vomit, with general febrile symptoms, and occasionally a sharp, cutting pain in the stomach and upper portion of the bowels. Mr. T. had a partially dry and very red tongue, with a desire to wet it every few minutes; skin dry and hot by turns, and then drenched with sweat; pulse 140 per minute, small, with artery quite firmly contracted on circulating fluid; bowels discharging frequently a copious liquid, light-colored, horrid-smelling evacuation. He had a sharp pain in the left side, directly over the attachment of

the diaphragm to the side, with cough, and an inability to lie upon the affected side; was wakeful, without any aberration of mind. There was more or less tenderness over the abdomen and also of the muscular system generally. He had a voracious appetite to eat, and desired the strongest kind of food, like pork, cabbage and potatoes, of which he would make a good meal for a well man, although, at the same time, his tongue was as red as a piece of beef. He was emaciated, and the countenance assumed a contracted, anxious appearance.

The medicine prescribed at this time consisted of pill hyd., grs. 3, pulv. gm. opii, gr. 1; one to be taken every eight hours, alternated with spts. turpentine, gtts. 25, in simple syrup. The blue mass was given to change the secretions and appearance of the evacuations of the bowels. The pill appeared to have no effect in changing the appearance, or controlling the evacuations, and after using it for two or three days, its further use was discontinued, and he was put upon muriatic acid, in 10-drop doses, well diluted with sugar and water, for the purpose of checking the profuse perspiration. After using this for about 48 hours, the sweating very much abated, and it was discontinued, and he was then put upon a solution of nitras argenti, the strength of which was half of a grain to the teaspoonful of rain water, to be largely diluted with water before taking. Of this solution he commenced with one-half a teaspoonful every six hours, which was increased to one, and finally to two teaspoonfuls at a time. This had the happy effect of checking the bowel complaint, and he began to amend, but his convalescence was very slow and protracted for months.

Now, while we firmly believe that the case of Mr. T. was one of trichiniasis, yet we are of the opinion that his being unwell, with a bowel complaint, at the time of eating the meat, which undoubtedly was raw, and in small quantity, and the increased irritation of the stomach and bowels, caused by the presence of the trichina in them, with the frequent evacuations of the same, thereby removing very many of the young trichina as soon as produced, aided him very much. That trichina passed through the coats of the bowels and entered the muscles in his case, we have no doubt; but far less in number than in the other cases of his family.

Mrs. T., as we have before stated, when first seen was laboring under general febrile symptoms; the tongue was nearly covered with a light-brown coat, the edges and tip of which were red, and the same redness extended a little way down the centre; the bowels were constipated; urine scanty. She had but very little pain, and that little was confined to the epigastric region. She also had a slight, hacking cough, without expectoration; the face was deathly pale, alternating with a very slight crimson flush, apparently deep-seated in the dermoid tissue; the pulse was from 150 to 160 per minute, small, with the artery quite firmly contracted on the circulating fluid. There was a frequent desire for cold water, but the amount taken at each time was small, it seeming that there was no great desire for very large potations.

As with her, so it was with the children, the symptoms up to the 11th of March being very similar in the three cases, the little boy apparently the sickest of the family. The brain did not seem to suffer much, all being perfectly sane, but a sort of wakefulness was plainly visible in each. From their appearance, we judged the exciting cause, whatever it might be, to be the same in these three cases, and the like was presumed to be the case with Mr. T., although, in some respects, he was somewhat different from the others. At our second visit Dr. Winchester was invited to visit the family with us, and kindly accepted the invitation.

The possibility of the family being affected with trichiniasis was then and there thought of, and all the facts then accessible were there elicited, and we were forced to the conclusion that this must be the disease of which they were afflicted. In coming to this conclusion we had many obstacles to surmount. First: The hogs from which the pork was made were reared on the farm, in a yard of about an acre; were out of this but once or twice, and then for but a few moments; were sixteen months old, and never known to be sick; they were butchered about the 1st of December, 1868, were well fattened, and the pork looked nice; the family had eaten of it from that time up to about the time of sickening without any bad effect; they had no recollection of eating any of it raw.

Previously, the house had been searched from garret to cellar, and the well from which they used water had been cleaned, without finding any local cause for the sickness of the family.

At this time the exciting cause, whatever it might be, lay hidden from view, and we only had the symptoms, as they then appeared, to guide us in our diagnosis. As the disease traveled on, the symptoms became more thoroughly developed, and the opinion before advanced was now much strengthened. A day or two subsequent to this consultation, a portion of the ham then in use by the balance of the family was examined under the microscope, and gave no evidence of trichina. On the 16th, the face of the wife and children began to swell about the eyes, and the muscles generally through the system began to be sore to the touch, which continued to increase; and on the 18th of March the muscles of the face and limbs evidently began to waste and the feet to swell. The œdema of the feet did not extend up the limb above the ankle at any time during the sickness of either of the patients. At this time there was a hoarseness of the voice and difficulty of swallowing. The patients were on the bed, flat upon their backs, without the power to move, or the ability to be moved, without suffering the most excruciating pain.

The bowels were still constipated, the abdomen was tympanitic and extremely tender to the touch; the pulse was decidedly quick, the skin at times a little warmer than in health, and at other times covered with a profuse perspiration. They now complained of great debility, but no pain unless moved. The appetite was good, with a desire for the heartiest kind of food. The urine was scanty, pale, and in one of the cases was for a time passed involuntarily.

On the 20th of March, and up to the 28th, there appeared to be some abatement in symptoms; but on the 29th they began to increase in severity, and continued so to do with Mrs. T. until the 6th of April, when death closed the scene with her.

The little girl began to amend about this time, but the little boy continued very sick until about the 20th of April, at which time he began to improve, but his convalescence was slow and tedious, it being some three months and a half from the attack before he could walk, and then for a time he could not get his heel to the floor.

The treatment advised in these three last cases was, first, a cathartic, composed of 10 grs. submuriate hyd., 15 grs. conv. jalapa, 1 gr. podophyllin, and 1 gr. c. ipec. for the mother, and

two-thirds of a like dose for each of the children, to be followed in six hours with oil and turpentine if the bowels were not freely moved. After the bowels were freely opened, they were each put upon an emulsion of spts. turpentine, in doses of 20 drops of turpentine for Mrs. T., and from 10 to 15 drops for each of the children, to be given every four hours.

While using the emulsion, they were allowed a liberal diet of mutton or chicken broth and condensed beef, with rice and crackers. A free use of the chinchona bark, together with other tonic medicines, were substituted in a few days for the turpentine emulsion.

Mrs. T. continued from the 11th day of March without any decided change up to 1st April, at which time she began to complain of great prostration, attended with a frequent, slight cough, with but very little expectoration, but a marked hoarseness was plainly discernable. On the 3rd, 4th and 5th of April, she still complained of the great prostration, with the remark that it seemed to her that she had not the power to fill her lungs with air, but was in no pain when lying still, but in great pain when moved. She also remarked that it appeared to her that she would fall to pieces if lifted from the bed on which she was then lying. A subsequent examination of the body demonstrated the fact that the muscular fibre was almost wholly destroyed, explaining without doubt the cause of those feelings.

Of the cases reported by Dr. Horr, in the main, the symptoms are much like those of Mr. Tefft's family, with this difference: his cases had diarrhœa on the second day, while three of those we attended had no diarrhœa at any stage, and the fourth one had a diarrhœa for some two weeks before being taken down with tne disease. Then, again, his had pain, soreness and debility of the muscles of the limbs on the third, with swelling of the face, followed on the fourth and fifth days by swelling of the hands, then of the feet and legs; while in those we attended the soreness of the muscles did not commence until the twelfth day, and they had no pain unless moved; the face bloated on or about the fifteenth day, and a day or two subsequently the feet swelled, but the legs did not bloat at all, but rapidly emaciated. In the little boy, the scrotum became swollen about this time, which lasted for a few days only. Mrs. T. died on the thirty-fourth day

of her sickness, the time of death from attack differing but few days from that of the Bemis family.

One of the cases reported by Dr. H. was that of a young lady, who, he says, had lameness of the muscles on the second, and diarrhœa on the third day. Now we are disposed to doubt the ability of trichina to enter the muscles so soon after the ingesta of the pork, and we cannot see how they should produce their specific effect on the muscle before they enter it. We here assume the ground that no parent trichina ever enter the muscles a second time. When taken into the stomach, they must necessarily occupy from four to six or eight days in being liberated from their capsule, conceiving, maturing and depositing their young, which, when so deposited, are the trichina which in their turn enter the muscular system. Now, if this be correct, we would not expect any pain or soreness of the muscles for the first six or eight days after the ingesta of the meat. It also appears to us that there must be a second brood of these little parasites, which are developed on or about the twentieth day after the ingesta of the meat, perhaps a little later. Our reasons for this opinion are simply these: First, each of the patients under our care was taken much worse on or about the twenty-eighth day of the disease, and it was not until this second attack (if so it may be called) that we seriously feared that Mrs. T. would not recover. From the soreness and emaciation of the muscles, we had every reason to believe that the trichina was there at work long ere this; and, furthermore, on examination of the body of Mrs. T., made on the twenty-fifth day after death, trichina were found encysted, and others not fully grown and of course not yet encysted. Now, had they all been produced at one and the same time, we should have expected them all to have arrived at maturity at or near the same time.

Trichiniasis is one of the most dangerous of all parasitic diseases, and it behooves the physician to study well the nature, origin and development of the entizone producing it, as well as the early symptoms of the disease.

The effectual treatment of the disease is confined to a few of the first days of the sickness of the patient, and before the parasite has time to mature its young, which it will undoubtedly do within eight or ten days after the ingesta of the meat. When

once the trichina have wormed their way through the coats of the intestines, they are then beyond the reach of medicine, and we have only to wait for them to feed, mature and encyst, which, if our patient has the good luck to survive, will most assuredly recover as far as is consistent with the amount of these little parasites left imbedded in the muscular tissue, which he will undoubtedly ever have to carry through life.

If this be correct, then how important to diagnose the disease at an early day, and apply without delay the only treatment which, in our judgment, has any chance of mitigating the evil effects of this little parasite.

We would commence our treatment at an early day, with the free use of active cathartics, followed immediately with a liberal use of the turpentine emulsion. Prof. Mosler, of Berlin, advises cathartics, followed with the following mixture, to destroy the trichina while in the intestines ; benzine, 2 ʒ, muc. of gum arabic, liquorice juice, each 1 ℥, in 4 ℥ peppermint water; of this a tablespoonful is to be given every one or two hours. The carbolic acid has also been advised, with a view of expelling the trichina while still in the intestines.

Prof. Fredrichs recommends the picronitrate of potassa as a remedy, to be given in grain doses, to remove the trichina from the system after they have entered the muscles, and cites a case as evidence of its good effect, where he harpooned the muscles several times, the last of which showed no trichina. The power of removing the trichina from the muscles by the use of the pichronitrate of potassa, as claimed by Prof. F., has not been confirmed by subsequent observations; and allow us here to reiterate what we have before said, that we do not believe that any known medicine possesses the power of removing the trichina when once encysted in the muscular tissue.

Therefore, we most emphatically say that, in our opinion, the first few days is the only time in which we can have any hopes of removing trichina from the system, and if this be passed without proper means having been employed, we may fold our arms and be lookers-on while our patients are being tossed about upon the turbulent sea of disease, without the means of rendering any, or but very little, real assistance, at most. We would here repeat and earnestly enjoin the old Scotch physician's recommendation

of two important things to be done by his patients, in order to the enjoyment of good health; the first of which was, to always keep the fear of the LORD before your eyes; and the second was, to always keep your bowels freely open with cathartics.

On this last hangs the sheet-anchor of the early treatment of trichiniasis, in our judgment.

In conclusion, allow us here to proffer our many thanks to Col. Beatty, of Elgin, for his kindness in first detecting the trichina in the pork of Mr. Tefft. He being a microscopist of much experience, we took some of the suspected meat to him, and he soon demonstrated the trichina to us, in great numbers, since which time we have personally examined much pork and many hogs, both in this State and Minnesota, and have not been able to detect the trichina in a single instance, other than that of the pork of Mr. T.

In the *Medical Examiner*, for May, 1866, we find the report of a committee, made to the Chicago Academy of Sciences, in which they state that, of 1394 hogs examined, they found trichina in 28, making one in 50, or very nearly so; while in Brunswick, of 19,747 hogs examined, there were but two found containing trichina, or one in 10,000, as against 1 in 50 in this country. The comparative immunity from the disease in our people results, no doubt, from the thoroughly cooking of the meat before eating it, while in Germany much is eaten raw.

According to the best information we are able to obtain at this time, it will require about 190° Fahrenheit, of dry heat, to effectually destroy the parasite.

It has been stated that 106° Fahr. would destroy the trichina most assuredly. This is only eight degrees above blood heat, and it would appear to us that the statement is an error. Now, one who is at all conversant with the tenacity with which this little parasite holds to life, would argue or attempt to state that so low a temperature as 105° Fahr., would effectually destroy the parasite, or securely protect the eater of meat containing them.

A cubic inch of meat containing trichina has been boiled for twenty minutes, and a portion fed to a rabbit, which was trichinosed; but a portion of the same meat was boiled a few minutes longer and fed to another rabbit, which produced no effect on it.

It has also been said that a saturated solution of chloride of

soda would kill this parasite in a few minutes, and that meat, salted and smoked, would wholly destroy the parasite. This, most assuredly, is not so; for the ham eaten by Mr. Tefft's family was both well salted and smoked before eating. Therefore, we are constrained to say that, in our judgment, the only safety in eating pork is in having it well and thoroughly cooked.

Since penning the foregoing, we have received, through the kindness of Dr. Reed, of Hampshire, a specimen of pork and sausage, from a family living in the western part of Kane county, who were taken dangerously ill after eating of the meat, a part of whom have since died.

This meat and sausage, according to our estimate, contains about 8000 trichina to the cubic inch.

In regard to the history of these cases, we know but very little that is reliable. But we know sufficient to induce us, again, to urge upon the medical profession the importance of thoroughly posting themselves in the early history and symptoms of this much-to-be-feared disease, so as to be liable to diagnose it at sight; for on this and the early judicious treatment, may and undoubtedly will depend the life of our patients, in very many cases.

While trichiniasis was only known to Germany, our people had but little fear of the disease; but now that it has become a disease known to exist this side of the Atlantic, and even to be laid at the threshold of many of our doors; and when we come to reflect that, according to the report of the committee at Chicago, made in the year 1866, of hogs sold in that city, we are liable to the disease (all other things being equal) as 200 is to 1; or, in other words, 200 hogs are trichinosed here to 1 in the German States, where it has prevailed to such an alarming extent.

In view of these facts, it would seem that our people should awaken to the reality of our situation, and take measures to devise, if possible, some means to protect the people of this country from the ravages of this much-to-be-feared disease.

ARTICLE II. — *Modus Operandi and Domain of the Turkish Bath.* By M. P. HANSON, M.D., Milwaukee, Wisconsin.

PRELIMINARY to a perfect understanding of principles and facts which I propose to set forth in this treatise, it is necessary to state very briefly the *modus operandi* of the thermæ.

One of the uses of ordinary perspiration is to maintain the equilibrium of temperature, on which the safety of the individual depends. The natural average temperature of the human body is 98° Fahr., and whenever it rises to 112°, or sinks to 60°, death ensues. Therefore nature has provided that this standard of 98° shall be maintained in every latitude, and under all atmospheric variations. When unusual heat is applied to the surface of the body, the system is called upon to protect itself by maintaining its equilibrium at 98°, and this is accomplished by throwing out water to be evaporated from the surface. When water becomes vapor, a large amount of heat becomes latent, and thus the higher the temperature, the more abundant the flow of sweat, and the more rapid the evaporation, and the heat is carried off latent in the vapor. Thus man is enabled to endure habitual exposure to an artificial temperature of dry air, as high as 400°. Carpenter says:

"Many instances are on record of heat from 250° to 280°, being endured in dry air, for a considerable length of time, even by persons unaccustomed to a particularly high temperature; and persons whose occupations are such as to require it, can sustain a much higher degree of heat, though perhaps for not any long period. The workmen of the late Sir F. Chantrey have been accustomed to enter a furnace in which his moulds were dried, whilst the floor was red hot, and a thermometer in the air stood at 360°; and Chabert, 'the Fire King,' was in the habit of entering an oven, whose temperature was from 400° to 600°." — *Human Physiology, Third English Edition, p.* 888.

Men engaged in various branches of manufacturing industry, such as ore smelting, iron foundries, rolling mills, and glass works, are habitually exposed, for lengthened periods, to heat, ranging from 200° to 350°, which they are able to sustain for years, without any loss of vigor, or detriment to health, and simply because there are seven millions little glands spread over the

inner surface of the skin for the purpose of secreting an aquæous fluid for exhalation and evaporation; thus carrying off the heat that would otherwise raise the temperature of the body. Water boils at 212°, when steam is formed, and not all the coal in Pennsylvania, heaped into one monstrous fire, could raise the temperature of water above 212°, so long as the steam or vapor is allowed to pass off. And just so a man can endure a temperature of even 600°, for a time, with impunity, provided the skin acts freely, and the atmosphere about him is *dry*, and drinks up rapidly the moisture that exhales, as dry air always will. So far, indeed, from high temperature proving injurious, it is owing to the adaptability of the skin to resist high artificial heat, that the bath relies for its marvelous sanitary and curative powers; and thus we see that there is no foundation for the popular, and, to some extent, professional prejudice about the hot-air bath increasing the temperature of the body to a dangerous degree. Such a prejudice is not only condemned by physiology and experience, but is in *direct antagonism to the very laws of our being.*

Now, how comes it that by a slight increasing of heat, there should be a sudden power given to the skin to throw out moisture? And where does this moisture come from? It comes from the blood; and to be able to furnish the moisture, the *skin must have blood;* and this is the grand secret of the *modus operandi* of the Turkish bath. *It is by equalizing the circulation*, and *thus removing congestion*, *whether of the lungs*, *the liver*, *the brain*, *or any internal organ*, *or tissue near the surface*, *or the skin itself.* When the heat is applied to the whole surface of the body, the blood that is freely circulating about the trunk is thrown to the surface, and the extremities; and its water, loaded with the effete and waste matter from the system, is given up to protect the skin; but the heat is continued, and more water is wanted, and more blood must be had, and now all the energies of the system are aroused to bring into the circulation the pounds of blood that have been stagnant, and congesting your lungs, or liver, or some other organ, for weeks, and all the absorbents are set to work, to take up any dropsical effusion, whether in the cellular tissue, or in the shut cavities, as the abdomen, chest, etc., that it may be restored to the circulation, and evaporated from the surface.

So, also, in equalizing the circulation, it distributes nutrition, as nutrition goes with the blood. Erasmus Wilson says: "Scrofula is imperfect nutrition; cancer is imperfect nutrition; indigestion, rheumatism, gout, neuralgia, are imperfect nutrition. Give a power by which nutrition can be regulated, and you can immeditely control these various diseases. Now there is no power by which the proper direction of nutrition can be attained, excepting through the skin, and that I believe to be the explanation of the extraordinary results which flow from the Turkish bath."

And, over and above all, the bath *purifies the blood* more directly and thoroughly than any other means the science of medicine has ever before suggested. Perspiration eliminates the water from the blood, loaded with the waste and poisonous matter from the system; and, by drinking cold water, the blood is replenished with wholesome material in exchange. Indeed, this is the most important purpose which perspiration serves. Man perspires, because perspiration, being the watery portion of the blood, carries out with it all extraneous and poisonous matter; thus removing all constitutional taints, whether of scrofula, syphilis, cancer, tuberculosis, or any blood disease.

The blood has to carry away the worn-out material which results from every motion of the body, or of the mind. While depositing fresh fibre, it has to remove old poison. In fact, that blood, with its watery portion, is washing the whole internal man, every instant of time, or, he is repeating back upon himself his own pollution.

While, then, we are constantly producing the phenomena of life, we are constantly producing the elements of death. Your own breath will kill; all that comes from you kills; it is poison, and the simple action of the thermæ, or Turkish bath, is to

Equalize the circulation,

Remove congestion,

Distribute nutrition,

Restore and keep active all the secretions, whether of the skin, the kidneys, or the liver, and thus eliminate poison from the system.

And any experienced physician will be able to see how many diseases may be benefited, or entirely controlled, by such an instrumentality.

The Turkish bath, however, in the minds of even medical men, is very generally confounded with the Russian, or steam bath, while neither of them is very well known to the profession. In structure and manipulation and general management, they are essentially the same; neither is represented by a tub or a steam-box, but should consist, at least, of four good-sized rooms. And right here the difference, which is vast and important, begins. The Turkish bath is for the application of dry, heated air (of sufficient temperature) to the surface of the body, and for sufficient time to produce profuse perspiration. On the other hand, the Russian bath is for the application of steam or vapor; and no scientific man, upon a little reflection, can fail to see the difference.

Water at 110° is quite scalding, and vapor at 136° can be endured for only a very short period, because there is no *evaporation* to protect the skin; no heat becomes latent, as in the process of evaporating the perspiration in the hot air bath.

The temperature of the human body is 98°. Immerse it in vapor at 130°, and, it being the coldest object in the room, becomes the condenser, and the water (not the sweat) begins to run from the body, which condenses it; and it is right here that *science* and *experience* meet. The pulse begins to rise, the face is suffused, the head is bewildered, and the sensible heat of the body increased towards the fatal degree. On the contrary, the Turkish bath is only comfortable at 140°, and is used with perfect safety at 240°. At 140° it does not increase the pulse four beats in a minute, while the water bath at 110°, and the Russian bath at 130°, will increase the pulse forty to fifty beats a minute, and cannot be endured more than one hour, while patients frequently remain in the bath of Dr. Urquhart, at Riverside, London, for six hours, and a part of the time at 230°; and, so far from being injured, the happiest results are thus secured.

Another essential difference is, that prolonged bathing in vapor, or water, produces great debility, as it *hinders* perspiration and robs the body of its electricity. Nature never does a work of supererogation; if the moisture is supplied from without, it does not come from within. In the *warm* water bath the parts under water do not perspire, and the patient increases in weight by absorbing the water. In the *hot* water, or vapor bath, he neither increases or diminishes in weight, because the irritation shuts up

the pores, in order to protect the tissues beneath. *Hot air*, on the contrary forces a free action of the skin, and, from its dryness, is highly electric. Hence the *invigorating* effects of the one, and the contrary effects of the other.

[TO BE CONTINUED.]

ARTICLE III. — *Puerperal Convulsions:* An essay read before the McLean County Medical Society, October, 1869. By J. LITTLE, M.D., of Leroy, Illinois.

NOTHING is more terrifying to a family than to have one of its members seized with convulsions; and never is a physician more hastily and earnestly appealed to for prompt aid than on such occasions. And in no class of cases has he so little time to reflect; and hence the importance of being well informed, and knowing the very best course to be pursued in the treatment of the different kinds of convulsions.

The term convulsion may be defined, "a violent, irregular, and involuntary contraction of muscles ordinarily under the control of the will." The phenomena and pathology of convulsions are essentially the same in all cases, though the causes and symptoms may be dissimilar. Convulsions are said to be tonic and clonic, depending on the duration of the spasm; tetanus belongs to the former and epilepsy to the latter variety. Clonic convulsions are simple in character; epileptic, epileptoid, and puerperal convulsions belong to this division.

The causes of convulsions may act centrically or eccentrically; centrically when they act upon the nervous centres primarily, and eccentrically when they act on the nerves of some organ or part, and are then reflected to the spinal cord. When a woman has convulsions during, previous to, or after parturition, they are called puerperal. In one sense this is always true, but in another sense it is not, perhaps, always true. When we speak of puerperal convulsions, we mean convulsions depending *per se* on the puerperal condition, or convulsions peculiar to the pregnant woman, generally occurring about the time of delivery.

Puerperal convulsions are not common — occurring in every 600th to every 1000th case. They are far more common in the

primipara than in the multipara; more common, as a general rule, in the more respectable unmarried primiparæ than in any other class.

Clinical observation has demonstrated that women whose urine is albuminous are very liable to have convulsions, and those whose urine is free from albumen are exempt. And it has further proven, that in proportion to the richness of albumen is the danger of convulsions increased. It has also proven, that if the albumen can be made to disappear from the urine, the danger of convulsions is passed.

But, is albumen in the urine a cause of puerperal convulsions? By no means. It only shows a disease of the kidneys. General or local anasarca, pallor of the skin, vertigo and feebleness, are symptoms of albumen in the urine; but, when suspected, the physician should be content with nothing less than its detection in the urine by nitric acid and heat. Now, when the kidneys are so diseased as to pour out with the urine the albumen of the blood, the urea is not eliminated from the system, but accumulates in the blood, and causes convulsions. Urea is an excrementitious principle, and in health is always found in the urine in small quantity; but when, from disease or any other cause, it is not excreted from the blood by the kidneys, it produces toxæmiæ of the most dangerous kind.

In Bright's disease there is albumen in the urine, and an excess of urea in the blood, and uræmic convulsions frequently occur. If one or both kidneys be removed from a dog, he will die of uræmic convulsions in two or three days. Now, what causes the condition of things of which we have just spoken, and which portends convulsions? Acute Bright's disease. And what causes this? Pressure of the gravid uterus upon the kidneys. Pressure of the gravid uterus causes frequently an enormous accumulation of fæces in the large intestine, and this increases the pressure on the kidneys. Pressure of the pregnant womb causes the veins of the lower extremities to be over-distended, and hence the cellular infiltration; and it prevents the usual amount of arterial blood going to the lower extremities, and causes an undue amount to be sent to the head and trunk and upper extremities, and causes a sur-excitation of the great nerve-centres, rendering the individual more susceptible to abnormal influences.

Taking all the facts into consideration — that primapara are more liable to puerperal convulsions than multipara; and that they are more liable because the pressure on the kidneys and gread blood vessels is greater, on account of tight lacing, to which they resort to conceal their condition, and their abdominal walls being more rigid than women who have borne children; the pressure of albumen in the urine, and urea in the blood, and the similarity of puerperal convulsions to pure uræmic convulsions — we must conclude that the great exciting element in puerperal convulsions is urea. Then the most successful treatment proves this conclusion to be correct.

When the kidneys are disabled, the skin and bowels are the channels that afford the most natural and direct outlet for the excrementitious elements of the urine. Saline purgatives and diaphoretics of the most active class, is the approved practice in warding off a threatened attack and in treating a case of puerperal convulsions. When the urea cannot be eliminated, on account of the frequency or severity of the convulsions, the next best treatment is to weaken its power, or render the parts upon which it acts less susceptible to its influence. Blood-letting, if the subject will bear it, will weaken the action of the poison by lessening its quantity in the blood, and chloroforming the patient will destroy the susceptibility of the nerve-centres to the urea. If all other means fail, the pressure on the kidneys and abdominal blood-vessels must be removed by prompt delivery, if possible.

Convulsions in the pregnant female, as in any other person, may be caused by acrid or indigestible substances in the stomach or bowels, and their cure demands the immediate removal of the cause. The pressure of the child's head, in its passage through the pelvic straits, may cause convulsions, but, as soon as the head is delivered, the convulsions cease. An over-distended bladder or bowel, a great and sudden impression, may cause convulsions in a parturient woman. These causes act eccentrically, and the convulsions so produced are not, as before intimated, really puerperal convulsions, because convulsions in children, or men, or the non-pregnant female, are produced by such causes.

The principal signs of puerperal convulsions are, albumen in the urine, urea in the blood, and local or general anasarca. The chief symptoms are, headache, vertigo, constipation, bad taste in

the mouth, nausea, amaurosis, double vision, muscæ volitantes, listlessness, sharp or severe pain in stomach, back, bowels or head, jactitation, etc. A general uneasiness and restlessness often precede for some hours and usher in the convulsions.

In all cases where we have the least grounds for suspecting convulsions, it is our duty to examine the urine at once, and if albumen is present, to use prophylactic treatment until it disappears. The most successful preventive measures are saline cathartics, diaphoretics, diuretics, and a non-nitrogenous diet. The woman should be directed to take outdoor exercise on foot, to lie on her sides, and to leave off her corsets and all close-fitting garments, in order to relieve the kidneys from pressure. There is no reasonable doubt that almost all cases of puerperal convulsions might be prevented by a rational course of prophylactic treatment timely begun. In this, as in many other disorders, the preventive treatment is the most successful, and, therefore, the most important. But the child-bearing part of community is not aware of this, and it is the physician's duty, in his rounds, to look out for cases requiring prophylactic remedies and prescribe them.

But when puerperal convulsions have occurred, the most successful treatment seems to consist in a judicious use of chloroform, blood-letting, stimulating enemata, hot vapor baths, cold to head, dry and wet cupping over the region of the kidneys and on the nape of the neck, or strong mustard drafts, and active saline cathartics or croton oil. Colchicum, benzoic acid, and acetate of potassa are the most highly recommended as diuretics; but these cannot be relied on to the exclusion of other eliminatives, as the kidneys are generally too much crippled to respond to diuretics. Bromide of potassium is highly recommended by many who have used it with good success. It is thought to act on and through the nerve centres, lessening cerebral and spinal congestion, and producing an anodyne and soporific effect, thus destroying, to some extent, the susceptibility of the nervous system to the spasm-producing agent. When every thing else fails, if circumstances would at all justify, the womb should be emptied, as the child in the uterus, and the urea in the blood, are the causes of puerperal convulsions. But if the urea can be eliminated or neutralized, or if the parts on which it acts can be so affected as to be insensible to its action, by treatment, the convulsions will be cured.

If our views as regards the causation and pathology of puerperal convulsions are correct, their treatment, to be rational, must eliminate or neutralize the urea, or render the nerve centres insensible to its presence. This, then, is the great object in the treatment of cases, whether occurring before, during, or after delivery. I have treated several cases of genuine puerperal convulsions, in accordance with the views here presented, with the best success, and will give the history and treatment of but a single case, in this connection, as it will serve to illustrate the foregoing remarks.

About eleven o'clock on the night of September 18, was called to visit Mrs. L., in haste, as the messenger said she was having fits. Was soon at her bedside, and obtained the following facts: She was taken in labor, at full term, on the evening of September 17, and after a tedious and harrassing labor was delivered of a large, healthy child, at ten and a half o'clock, A.M., on the 18th. She was a primipara, twenty-two years of age, nervo-sanguine temperament, stout, short and muscular, of sedentary habits, and habitually costive. Her feet and legs had been considerably swollen for several days, and she had complained of dizziness, and headache, and trouble in voiding her urine.

The labor being completed, she was bandaged and dressed, and every thing done that could be to promote her comfort; but still she complained of a good deal of pain in the region of the womb, and as time wore on, the pain increased and extended to her back and stomach. She became restless, and turned and tossed from side to side, in spite of admonitions to lie still, or she would hurt herself or babe, until the latter had to be removed for safety. About five o'clock the pain in her head became intense, and about six o'clock a very severe pain occurred in the right hypochondrium, and these pains continued with no abatement till about seven o'clock, when the first convulsion took place. The convulsions returned about every hour and a quarter, and she had her fifth one ten minutes after my arrival.

Ordered a sinapism over region of kidneys, another on nape of neck, and another on epigastrium; a hot, stimulating pediluvia, twelve hot bricks, enveloped in wet cloths, to be placed in the bed pretty close to the patient, and cold water to head. Gave fifteen grains bromide of potassium, and a teaspoonful of spts.

eth. nit., with five drops fld. ext. colchium, and in fifteen minutes gave a tablespoonful sulph. mag., in half tumbler cold water, and in fifteen minutes more administered an enema, consisting of two-thirds of a pint of warm soap-suds, a tablespoonful each of castor oil, spts. turpentine, and common salt. Introduced catheter, and drew off about four ounces of dark, offensive urine, loaded with albumen. Repeated the bromide of potassium, and sat down by my patient, with chloroform at hand, determined to forestall the next convulsion by its use; but in this I was disappointed, for, before I was aware of it, the time for its return had come, and she was seized with another hard convulsion. When it had passed away we persevered in the treatment begun, repeating all the internal remedies in the order mentioned above. About fifty minutes after the last convulsion her bowels moved copiously, her urine passed freely, and she was perspiring profusely. Ten minutes before the time for next convulsion she was chloroformed pretty thoroughly, and was kept in this condition, with an occasional letting up, for three hours. During this time her bowels and bladder had been well emptied again, and she had continued to sweat freely. I remained with her till eleven o'clock, A.M., on the 19th, continuing treatment less heroically than at first, and as she had had no convulsion since about two o'clock in the morning, and seemed calm, rational and comfortable, and could take a little nourishment, I pronounced her out of danger, and took my leave. Directed a half Seidlitz powder to be given twice a day, and a teaspoonful of this: ℞. — Spts. mindereri, f℥ iiss; tinct. colchici. sem., f℥ ss. M. To be given every four hours, for two or three days. Light, bland nourishment, three or four times a day, and cold lemonade *ad libitum*. Perspiration to be encouraged by warm sponge baths, and the warm bricks. Heard nothing from my patient till October 5, when I learned she was very well, and had been doing her work for five days.

ARTICLE IV.—*Cases of Syphilis.* By F. B. NORCOM, A.M., M.D., Chicago.

CASE No. 1.—Mr. L——, unmarried, æt. 29, came to consult me, June 3, 1868, in relation to ulcers near the frænum. Muscular; full of red blood; nervo-bilious temperament; fair in his habits; moderately addicted to wine, a little more so to women. He had contracted his present trouble from an intercourse dating fifteen days back, about 19th May, and it was now the ninth day of its appearance. An examination revealed two small chancroids, right side; the smaller invading the frænum, and still spreading at its periphery; the larger showing some slight reparative action; both irritable, and covered by a rather profuse purulent discharge. No specific induration could be detected, and both groins exhibited multiple enlargements, the right, however, with large single bubo, tender upon pressure, and evincing a desire to suppurate. There had appeared, also, a slight watery discharge, a few days before, from the urethral canal, with some pain, and being already alarmed at the delay in his cure, this new complication caused him to dismiss unwarrantably his surgeon, and apply to myself, a change I did not believe for the better. I could discover nothing in the canal except a hyper-sensitiveness upon passing the sound, and simply recommended mild astringent injections. His general condition was not good; tongue coated; bowels costive; anorexia; light fever, with decided exacerbation at night, and broken slumber. Though very anxious about himself, he was unwilling to incur much further expense, nor could be persuaded to leave his business and keep quiet until the ulcers were healed, and all tendency to glandular suppuration averted. I touched the periphery of each chancroid with nitric acid, and ordered an astringent wash with aromatic wine, at same time attending to his proper secretions, and giving him a quinine and acid tonic. I explained the folly of keeping so constantly on his feet, and undergoing the fatigue of business, if he desired a speedy and happy termination to his present trouble.

Did not see him again until June 16, when I visited him at his boarding-house, to find that he had been under the management of one of his personal friends, who had had some experience

of his own; had read Ricord, and who, though not a medical man, considered himself capable. To each groin a large, soft, fluctuating tumor, the right one about to open spontaneously; frænum destroyed; chancroids partially cicatrized, though indolent; and general condition bad, there being great constitutional irritability, with its usual concomitants. Gave him an anæsthetic; opened both buboes freely, and with my thumb gouged out the broken-down gland structure, making as clean cavities as practicable, and using water dressing covered with oil-silk, at same time slightly brushing the chancroids with nitrate of silver.

The next day, the 17th, he felt refreshed, a good night's rest being secured by an anodyne, and having lost that dreadful, dull, throbbing pain and fullness of the groins. Under a liberal and nutritious dietary, with tonics, he began to build up rapidly, and I left the case, 12th July — the cavities having almost closed — assuring him that there was no constitutional infection.

On 5th September he reappeared, with syphilitic roseola of the forehead; faucial erythema; some degree of syphilitic fever; loss of appetite; and in a condition of extreme alarm and rage, partly directed towards his disease and its future bearings, but more particularly against his doctor, who should have foreseen all this, and provided against its approach. It was somewhat puzzling to account for these secondary manifestations, especially as he had been continent since his first attack, and I felt certain my diagnosis and treatment had been correct and philosophical. Both groins exhibited well-marked multiple enlargements; posterior mastoideon adenitis also present, but no nodulation at the site of the chancroids. I examined by palpation and with the instruments the canal critically, to discover if possible the situation of the chancre, which must have been a companion to the ulcers, but failed. Believing in the spontaneous elimination of syphilis under favorable circumstances, and knowing my patient to have a fine constitution, I calmed his fears, and ordered mercury and quinine to simply touch his gums. This was accomplished in about four days, then the mercury remitted, and tonic continued for at least a month, besides a nourishing diet, etc., etc. He called upon me several times this month, and everything seemed satisfactory, the eruption fading rapidly, and

the congestion of the throat improved, having never reached abrasion.

On the 11th October I renewed the mercurial, always combined with tonics, liberal food, warm bathing, etc., etc., and having again touched the gums, dropped the drug, but continued the sustaining treatment, though at this stage there was present a lenticular eruption of the abdomen, a few impetiginous spots of the scalp, and some alopecia.

He left the city shortly after this, and I did not again see him until the first week in January, 1869, when he was suffering from mild iritis, of few days standing; sore throat, superficial ulceration; several mucous patches on the tongue; and osteo-cepic pains at night. The iodide potassium in compound tincture cinchona; mercurial inunctions, etc., were exhibited, while the photophobia was greatly relieved by daily painting the forehead with strong tincture iodine, and throat washed with 40 gr. solution nitrate silver. Under these remedial agents he recovered rapidly, and up to this date — for I have watched him carefully, and always kept him in sight — has had no further accidents, and enjoys very robust health.

I present this case merely as a type of a certain class coming under the observation of physicians, and appearing subversive of the generally received doctrine, that constitutional contamination can only follow chancre. From observation, and from a critical examination of such "mixed cases," I have, as a rule, been able to discover that the true syphilitic sore did exist; and in several instances where I procured examinations of the women, have generally determined, if not the ulcer itself, the evidence of systemic poisoning, as shown by the engorged glandular system, the cutaneous irritation, and the morbid changes of mucous surfaces.

That a concealed urethral chancre (*larvé*) did exist in this instance, I have no doubt, there being discharges and pain for several days, but escaped from my want of skill in detecting its *locale*.

The present and subsequent history of his *inamorata* I could never learn, as he was unwilling to renew the acquaintanceship; nor could he be persuaded to prosecute further inquiries as to her present condition, she being a "ladye faire," blushing under the shade and shadow of her husband's "vine and fig-tree," and

doubtless ignorant that her *complacency* and *abandon* had given birth to such sad results among at least one of her admirers.

Moral: *Le jeu ne vout pos la choudelle.*

Case No. 2.—Mr. B., aged 26 years, unmarried, a book-keeper, nervo-bilious temperament, and with strumous tendencies from hereditary taint, formerly much given to social enjoyments — pretty free use of alcoholic stimulants; ditto of females — *comibus longissimis, et id omne genus* — and consequently had received several visitations from clap.

He was placed under my care May 2, 1868, suffering from two putative chancroids on prepuce, near and to right of frænum, also multiple adenitis; and as the treatment so far pursued had been judicious, and the ulcers granulating, it was thought all danger of glandular suppuration had passed, and there could be no constitutional poisoning. His general condition was good, and there appeared nothing to do but continue, and allow the sores to heal. I was convinced, however, the moment I pressed the ulcers between my fingers, and from their extremely superficial character, as well as almost entire absence of discharge or secretion, that I had not chancroids to deal with, but well-marked parchment chancres, and was still strengthened in this belief by the long period of incubation — thirteen or fourteen days — and by the attendant *pléaides ganglionaires.*

As the case was now placed fairly under my charge, I prescribed a mild stimulating lotion, and such measures as would tend to keep up the tone of his system; at same time administering iron and tonics to prevent, as far as possible, blood deterioration. I was forced to give my opinion that, within three months, he must expect constitutional manifestations, and caution him against excesses, especially the too free indulgence in liquors, etc., which might tend to impair his vital or recuperative power, as I should count largely upon this to assist me in eliminating the *materies morbi*, when the time came for active interference. In ten days his ulcers were healed, and all tenderness of the inguinal region subsided, and his treatment continued.

In July he returned, with inflammation of fauces and tonsils, mottled and rough; slight falling of the hair; a well marked papular eruption of both legs; and some constitutional disturbance.

His face had lost, in some degree, its fresh, rosy hue, and he had fallen in weight, showing the sure and subtle influence of this specific virus upon his general nutrition.

He was given the blue mass, quinine, and opium until its effects were noticed upon his gums, then discontinued; and tonics, besides a liberal dietary, with a glass or two of wine or ale throughout the day; bathing, and exercise in the open air, so far as compatible with his business. This management was continued steadily, the mercurial resorted to every four or six weeks, for a few days, for at least four trials; then a course of alkaline carbonates, with bitter tonics, to complete the course. The eruption had gradually disappeared, leaving the characteristic coppery or violacious stains — so pathognomonic of this disease — and all the attendant secondary changes ameliorated.

The October following, he came in from one of our western cities, suffering acutely, the last few days, with iritis of the left eye, sympathetic weakness and irritation of its companion, and severe frontal neuralgia. Dr. E. L. Holmes saw the patient with me, and as abundant lymph had been thrown out, covering the iris and occluding its pupil, he advised the treatment, already instituted, to be continued — mercurial inunctions, iodide potassium, quinine and atropia, and counter-irritation locally.

The inflammatory condition passed away in two weeks, leaving, however, great weakness, and some blurring of vision from defective nutritive changes in the atroptric media; but in a few months, these symptoms passed away; and under the continuous use of iron, quinine, cod-liver oil, etc., he seemed to regain his health; and by the spring, weighed as heavily as usual.

This treatment was essentially demanded by the condition of his lungs, which exhibited, upon careful examination, crude tuberculous masses in their apices; harsh inspiration; prolonged expiratory murmur; increased vocal fremitus and resonance; with dry cough and shortness of breath. Even these symptoms diminished in intensity, and in June his physical condition was better than it had been for many years.

On 11th August, while walking in the street, he was suddenly struck by hemiplegia, being only preceded the night and morning before by some little vertigo, distaste for food, and a feeling of *malaise*. I saw him a few hours after his seizure; found complete

palsy, hyperæsthesia, and, for a short time, increased temperature of the left side, with well-marked reflex movements; no abnormal intercranial sensations, but palsy also of same side of face, tongue, and enlarged pupil. Prof. Moses Gunn came to consult with me, and though we could not decide upon the exact lesion, yet, without question, we considered this state to result from specific disease.

Cold and heat applied alternately to the spine; large doses iodide potassium; moderate diet; absolute quietude; and, to satisfy every demand of his anxious friends, the direct current of electricity.

On the 19th, he had so far recovered that he left the city, to stay with some relatives; and since that time has been steadily improving, regaining his lost powers, and exhibiting no further manifestations of a syphilitic character. He is now in fine order, still taking his tonics, cod-liver oil, etc., and giving every attention to his general health. "We shall see what we shall see."

This patient presents to us several facts worthy of attention; the main one, the early invasion of the intercranial structures; the marked severity of the seizure; and the celerity of his recovery therefrom. As a rule, such attacks occur at a much later period of the disease, and come within the category of tertiary accidents, due either to slowly-formed periosteal growths, with pressure, or to *ramolissement* engendered by deficient red-blood supply. We have the analogue in these so-called atheromatous changes produced by gout, rheumatism, etc.

Notice the symptoms, in their proper sequence, between case number 1 and case number 2: Both young men, with plenty of recuperative energy; the one, however, with hereditary predisposition to scrofula, and impaired *vital power from excesses in alcohol*, women, and irregular hours; the other, a perfect constitution and well regulated life. In the latter, the secondary symptoms of the mildest character, easily controlled, and never bordering upon the tertiary stage; in the former severe secondary, rapidly assuming tertiary forms, affecting the most important organs of the economy. Elimination and antagonism rapid and well defined in the one; feeble and unpromising as to the future in the other.

Moral: Live temperately, and husband your resources like a Christian; be virtuous, and you will be happy.

Case 3.—Col. H., married, aged 51, of sanguine temperament, vigorous and full-blooded, came to consult me Aug. 20, 1868, for a swelling in his left groin, somewhat painful upon pressure, and so far impeding locomotion as to interfere with his daily business; of irregular habits, being fond of his *toddy*, equally so of high living, and still more so of those frail daughters, who "submit not without a sigh, and yet submit." Never been afflicted by any form of venereal disorder before.

The left groin was occupied by a very hard and tender tumor, and accompanied by numerous smaller satellites; the right, with several well defined enlargements, also; no throat trouble; no posterior cervical adenitis; nor could I detect the *debris* of an ulcer on the organ, nor elicit any information from a strict examination of the canal.

He only noticed the swelling about six or seven days before, and he assured me that he had held no intercourse with women since his wife's departure for the East, about the latter part of June. I was the more inclined to accept this statement, as he was an upright man, a member of the Board of Trade, went to church habitually, and was kind and considerate to all brought in contact with him; so, I had to pursue or fall back upon some of those far-fetched theories entertained by the profession many years, even after Fernel, when our knowledge of syphilis was in its infancy, and when it was supposed possible to contract it by mere contact — the shaking of hands, the chaste salute, etc., — bearing the seeds of contagion, like the glove, or the bouquet, or the ring of a Borgia. His general condition was not particularly bad. Some little constitutional irritation, engendered, or at least enhanced, by his daily potations, for he was pretty *full* at this moment. He was ordered saline cathartics; his diet lowered; confined to his sofa; cut off from his toddies as far as possible; painted with strong tincture iodine; and sponge compress, with spica bandage, applied. He was visited at his house for ten days, the iodine and compression decidedly persisted in, and the bubo soon diminished to almost the size of its companions, when he was placed upon iron, quinine and small doses of protiodide, and at same time resumed his business, and, in all probability, his ordinary habits. I believe he continued this treatment not longer than three weeks, and then thought himself

cured; but September 29th, came back, with hoarseness and faucial inflammation, in patches and abrasions, extending to the tonsils; lenticular eruption of the belly, and syphilitic efflorescence of the forehead and right cheek. His system in a measure sympathized with these manifestations, and his mental condition was distressing. He was placed under strict constitutional treatment, and all proper means instituted to keep up a fair balance between his health and an attempted elimination or neutralization of the specific virus circulating in his blood. On the 4th of October, the proper effects being noticed back of his molars, the mercurial was much reduced in its dose, and a nutritious but unirritating regimen instituted, with small quantities of sound wine to replace strong drinks.

As the colonel felt very wretchedly about having such a disorder, the more especially as he could not understand how it had been contracted, and might lay him open to the animadversions of his friends, should he be suspected, he followed the treatment ordered rigidly and faithfully, confining himself to the house until at least his face could no longer be the tell-tale of his "unmeasured woes," and, by letter, retarded the return of his wife, expected home about the middle of the month. This step appeared to me rather unnecessary, as this gentleman had repeatedly assured me of his entire innocence, and should not have been apprehensive. Ah, colonel! should I accept your statement without the *granum salis*, it would knock all my long-cherished theories, all my hard-worked experience into a cocked hat, and throw a mazy veil of obscurity and doubt over the results of many years of untiring labor and accurate observation; but ponder and read:

> I saw the loveliest rose that graced the lawn,
> With blooming fragrance gladdening all around:
> Too bold, I thrust the forward hand,
> Missed the fair flower, and only felt the wound."

The eruption on his face, a delicate roseola, began to subside in a few days, but impetigo appeared on his scalp and posterior cervical enlargements; while his throat became, if anything, worse, the ulcers deeper, more confluent, and more characteristic, and voice almost entirely gone. A rapid and decided impression was

now made upon his system, at the same time using such local applications as were necessary for throat affections. About the 12th of the month I began to feel my patient improving, and regaining his voice and spirits; and, by the latter part of the month, the throat was well; so he was ordered the "mixed treatment," to be continued many months, and enjoined to commit no excesses in drinking or otherwise, but to maintain the standard of high health. This patient remained well and vigorous for some time, but came to visit me in July, 1869, when I was absent from the city, and, upon my return in August, gave me a call to exhibit a small periosteal node upon left tibia, and excessive surface tenderness of both bones, with, I thought, some sub-periosteal effusion. The iodide potassium, with bark mixture, in fair but increasing doses to saturation, nutritious diet, bathing, etc. In a few weeks he was apparently well, only complaining of occasional nocturnal pains, and slight tenderness upon pressure, enhanced by damp, rainy or windy weather. I attempted to persuade him to winter at the Hot Springs, in Arkansas, as I knew the virtues of those waters unsurpassed in their curative properties upon all blood diseases.

There is one fact to be noted, however, in regard to the failures in many instances among those who visit these celebrated springs, and which is generally laid upon the wrong shoulders. Patients go there, and, having plenty of leisure time, begin to play "draw poker," consume large quantities of bad whisky, neglect the treatment and regimen instituted by the local physicians, and, after a few months' experience, become disgusted and sceptical. They should remember that, at home, especially in Chicago, they could have as much "draw poker," bad whisky, and a greater abundance of all good and bad things, than in any other city of its size in the universe; and it would seem to be an unnecessary and unreasonable waste of time and money to seek further.

Case 3rd presents another phase of this Protean disease. A bubo (*d'emblée*) as the primary accident, followed by secondary and tertiary phenomena. This doctrine was accepted, and held sway for many years among many of the best physicians in France and Germany; but it has gradually lost ground, and few can be found, now-a-days, to uphold it. Such apparent inconsistencies

arise, generally, not so much from the still-existing obscurity as to the essence of this disease, but to our lack of skill, ignorance of its history and effects, and want of proper observation.

Moral: In the sere and yellow leaf, seek not Aspasia; *now* the Oceanidæ should be impossible.

ARTICLE V. — *Microscopic Investigation in Cases of Sterility.* By B. H. CHENEY, M.D.

"*Ut alia sic alia facere possumus.*" — PROVERBIUM POPULI AMERICANI.

IN the January (1869) number of the *New York Medical Journal*, is an article by Dr. J. Marion Sims on "The Microscope as an Aid in the Diagnosis and Treatment of Sterility." This article was previously read by its learned author at the meeting of the medical society of the county of New York, December 7, 1868.

I wish to say, at the outset, that I entertain the greatest respect for Dr. Sims, as one whose deservedly high reputation reflects credit upon the profession, and upon our country. I also realize that it may perhaps seem presumptuous in so humble a member of the profession as myself to criticise him. Still, there are things in the paper above referred to, concerning which not only every medical man ought to be capable of forming a decided individual opinion, but also which should be noticed by the profession at large.

The object, in substance, of Dr. Sims' paper, is to recommend, in investigating cases of sterility, the microscopic examination of the semen of the husband; this semen being obtained with a speculum from the vagina of the wife, as soon as may be after coition. This examination is thus instituted for the purpose of settling "three questions which must be decided before any case of sterility can be treated understandingly," viz.:

"1. We must be sure that we have semen with spermatozoa."

"2. We must ascertain if the spermatozoa enter the utero-cervical canal."

"3. We must determine whether the secretions of this canal are favorable or not to the vitality of the spermatozoa."

Critics and reviewers are often accused of misrepresentation,

or of leading to false impressions by quoting only a sentence or two here and there from the work or article under consideration, omitting the context, which might perhaps put a different construction upon the whole matter. To clear myself from any such imputation, and as some of your readers may not have seen the paper of Dr. Sims, I will quote from it that portion to which especial reference is here made. Let Dr. Sims, then, speak for himself:

"To find out all at once, and with the least delay and trouble, I usually say to the husband or wife, as it may be, 'It is very important before instituting any treatment, to be sure that the seminal fluid enters the neck of the womb, for without this, conception is impossible. We must also ascertain if the uterine secretions kill the semen; if so, a certain treatment will be necessary. If you will, then, send your wife here, or come with her any day, five or six hours after coition, it will be easy to settle these points at once.' In nineteen cases out of twenty, the wife presents herself the next day. The speculum is introduced, (and when I say the speculum, I always mean the one that bears my name), and some vaginal mucus is removed by the syringe, and placed on an object-glass. Then some cervical mucus is drawn out and placed on another object-glass. These two specimens are then examined under the microscope. If we find spermatozoa, well and good; but if we find none, neither in the vaginal, nor cervical mucus, our fears are at once aroused. What, then, is to be done? I simply say that I am not quite satisfied with the examination, and would like to see the wife again, at some future time, under the same circumstances. But, suppose we find no spermatozoa on this second examination? Then two questions immediately arise: either, that there are no spermatozoa, or that the semen has all passed off before the case came under observation. Sometimes the semen is all instantly thrown off by the vagina, and then it would not do to pronounce the husband sterile till we are sure of a specimen of his semen for investigation. If I fail to satisfy myself on this point, I then explain the possibility of the semen all passing off, in the act of rising and dressing, and show the absolute necessity of making the examination half an hour or so," (so=less?) "after coition, and before the erect posture is assumed. When the subject is presented in

this plain, practical manner, and treated seriously, no man or woman of sense could oppose it; and, with me, it has never, in a single instance, been objected to."*

Now, I am not, by any means, disposed to be prudish, or hypercritical in medical or scientific matters. Of course, "to the pure all things are pure;" and if the maxim that "the end sanctifies the means," be ever justifiable, it is so in circumstances and considerations affecting the health, the well-being, or the happiness of any human being.

But still, it would seem that to adopt such a procedure as that recommended above, is to go a little too far. The doctor, whoever he may be, earnest, enthusiastic, waits in an adjoining apartment, armed with speculum, sponge, syringe and microscope, while the husband and wife retire to celebrate the rites of hymen under the kindly favoring auspices of stern science. The act consummated, the disciple of Æsculapius, who is, for the nonce, the representative of science, and who, let us hope, though conscious of his proud mission, bears himself with becoming dignity and meekness, is ushered by the husband into the chamber where the wife is lying, still flushed and warm from the marital embrace, "not yet having assumed the erect posture." He introduces the speculum with the comforting words, "Madam, I will soon tell you why you don't have a baby." Perfect silence reigns. The expectant couple, yearning for parental joys, await in trembling hope the oracle, which is to bid them try again, or give it up as hopeless. The man of science looks, examines, tests, and finally gives — his opinion. For, after all, it is simply an opinion.

I would respectfully submit the question: ought not any competent physician to be able to determine, at least so far as to serve as a basis and guide for a rational therapy, whether a given case of sterility be curable, or beyond treatment, by a separate examination of the husband and wife, without resorting to the procedure recommended by Dr. Sims? The three questions, the settlement of which he very correctly insists upon as essential for the proper understanding and treatment of the case, viz.: as to the presence of spermatozoa in the semen; as to the possibility or impossibility of the spermatozoa entering the utero-cervical canal; and

* *New York Journal of Medicine*, January, 1869, pp. 400-401.

as to the character of the vaginal and utero-cervical secretions being favorable or not to the vitality of the spermatozoa; — these three questions, which are all he claims to determine by his method, can certainly be about as well decided by a separate examination of the husband and wife.

That Dr. Sims should advocate such a measure, is certainly cause for surprise; second only to it, is the wonder we feel when we read that his proposition for such an examination has, with him, "never, in a single instance, been objected to." For one would naturally think that most husbands and wives would scarcely consider the possible, and, at the best, uncertain result, a sufficient compensation for the means.

I would not be "old-fogyish" in conservatism, and am certainly far more disposed to welcome and adopt, than to criticise, or, least of all, ridicule, any thing which may conduce to the advancement of science, or the welfare of humanity. But it surely seems that if this procedure had not the indorsement and prestige of a name so deservedly high as that of Dr. Sims, it would be too ridiculous and indecent to be noticed.

ARTICLE VI. — *Report of a Case of Typhoid Fever, Showing the Range of Temperature from the Beginning to the End of the Case.* By T. C. MURPHY, Green Valley, Ill.

IT will be necessary for me to give a sketch of the residence, mode of living, etc., of the patient, Samuel W., aged 30, occupation farmer. Mr. W.'s residence is situated in a small grove of scrub oak. On the south of the house is a large swamp; this swamp is covered with water during the spring and part of the summer months, furnishing abundance of malaria — in fact, it might be called the home of ague, the residence being situated so near to the swamp that pure air must be a stranger to the family. Mr. W., being a tenant on the farm, to save time, dug a well at the edge of the swamp. Into this well flowed the washing from the barn-yard, the surface water of the swamp making it a mixture of strength — in fact, it was not fit for a human being to drink. Being at the residence of Mr. W., during the month of June, 1869, I told him to have a well dug on high ground, so as to obtain

pure water. He said he had not the time to spare, and he would get along with such as he had. I told him if he did not dig a well he had better hire a physician by the year. During the month of July, Mrs. W. was taken sick; she had the remittent fever. I treated the case according to the indications. She got along well and passed from my care. I saw no more of the family until August 10. Mr. W. called at my office. He wanted medicine. He remarked, "My wife is having chills; she don't seem to be getting along very well. I am all right." A glance showed me such was not the case. He was pale and anæmic — in fact, he looked like a small traveling hospital. I ordered him quinia and iron; and again, "Please get a well dug." He went on his way rejoicing.

We now come to the facts in the case proper. I was called to see Mr. W., August 21. Found him in bed; had a severe chill at 10 A.M.; had fever at the time of my visit; temperature 105° F. Ordered quinia sulph., grs. 3, every three hours, in absence of fever. I could not see the case on next morning. When I did call, I was informed by Mrs. W. that my patient was better — to which I could not agree. I found my patient hard to arouse, unconscious of what was going on. On being aroused, I could get no satisfactory answers from him. I learned from his wife he had passed no urine since my last visit; picked at the bed-clothes during the night; low, muttering delirium; did not complain of pain, and he must be getting better. Flies were having a picnic over his face undisturbed. The family did not seem in the least alarmed. On examination, I found the bladder contained no urine; as he had passed no urine for near forty-eight hours, I was anxious for the result. Uræmic poisoning was near at hand. Temperature, 102½°. Diagnosis, typhoid fever.

I paid no attention to the treatment of typhoid fever (so called). The indication was: eliminate, or the case will pass through your digits. I ordered a strong decoction of buchu to be taken through the day. I called again at 9 P.M. Patient had passed no urine yet; is stupid, sweating profusely; sweat has a strong ammoniacal odor. On examination, I found the temperature 103½° F. I passed the catheter, and drew off a small quantity of urine; its smell resembled that of the Chicago river. I now started on a voyage of discovery. I asked if there was a cellar under the

house. Yes. I examined the cellar; found it contained a mixture of decayed pumpkins, potatoes, bedsteads, old crinoline, boots, fungi (or toad-stools), *et alii*. The house had been banked up with horse manure during the winter; as it decayed, it found an inlet into the cellar — to make an outlet for human life. Do you wonder that typhoid flourished in such a den? I do not. Where the accumulated filth of years becomes concentrated in a cellar, under a house 16 by 16 feet, what wonder that the poison arising from such a "black hole" should act with such force on the nervous system of the patient, oppressing him nearly to the grave. I told the friends of the patient I could do nothing for the case, in such a house, as typhoid had marked it for its home. I at last got permission to move him to a large, clean house in the vicinity. I secured a room, 16 by 20 feet, where I could obtain fresh air, pure water, light, sunshine, and cleanliness, God's choicest blessings to man. Now, having secured a room to suit me, and procuring elimination by the kidneys, we wish to keep up the action of the eliminating organs — the kidneys, lungs, skin and intestines.

Third day: Tongue is covered with a yellow fur; trembles on being put out of the mouth; is dry and parched; tenderness and gurgling in the illiac region; diarrhœa; low, muttering delirium; temperature 104°. During the night the patient was restless; tried to leave his bed. I ordered the following:

℞ Hyd. submur., - - - - - - - - gr. ij;
Pulv. doveri, - - - - - - - - - gr. j;
Give one every three hours.

Second—

℞ Spts. ether nitric, - - - - - - - - ℥ j;
Fld. ext. veratrum, - - - - - - gtt. viij; M.
A teaspoonful three times a day.

Object of the above: The first, to secure elimination by the intestines; conveying out of the system, by the agency of the discharges, the morbid material presumed, with great probability, to contain the specific virus of the disease. The intestinal glands eliminate the poison. The object of the second is clear.

Fourth day, 10 A.M.: Temperature, 104°; pulse, 135. Under the combined influence of pure air, sunshine, light and cleanliness, and the eliminating organs doing duty, the stupor has passed off. Patient answers questions quite well; flies creeping over his

face attract attention — in fact, a change is apparent to all. What produced it? Cleanliness, in all its virgin purity. The surface of the patient was sponged with tepid water three times a day. The kidneys secrete a sufficient quantity of urine. Treatment continued.

Sixth day, 7 o'clock, P.M: Temperature 104, pulse 130, bowels moved three or four times during the last twenty-four hours, answers questions well but is soon asleep; passed about xxiv ℥ ; it contains a large amount of excreta; destruction of tissue is rapid, as shown by the high temperature, and the amount of excreta contained in the urine. Ordered Doveri, grs. v; camphor pulv., grs. ij, every four hours during the night, to allay nervous irritability. Ordered the following during the day:

℞. Acid sulph. arom., - - - - - gts. xx;
Quinia sulph., - - - - - - grs. ss:
Aquæ mentha pip. - - - - - ℥ i;
Given every four hours during the day.

Seventh day, 9 A.M.: Temperature 103; pulse 130; bowels moved twice during the night; rested quite well during the night; tenderness on pressure over the abdomen; will take no nourishment only milk and lime water, in small quantities at a time—he says "I don't want any thing to eat; I am not hungry." And now having secured the elimination of the poison in some degree, we must bear in mind, this man must eat to live; we must supply material to repair the excessive tissue-change that has taken place. The indication now is — obviate the tendency to death; support, feed. As I cannot see my patient every day, I order him wine, beef-tea, egg-nog, milk-punch, in such quantities as I think will be digested and assimilated; in fact, any thing which contains the elements of nutrition. Again feed; don't wait for the call of the typhoid case, or he may starve to death:

℞ Acid sulph. aromat., - - - - - gts. xx;
Quinia sulph., - - - - - - grs. j;
Aquæ mentha pip. - - - - - ℥ i; M.
Every four hours during the day.

Doveri in five-grain doses at night, as often as may be required to secure sleep. I don't care so much for medicine, so-called, as I do that the patient receives proper nourishment. Calomel, jalapa, or any other infernal mixture, never rebuilt the smallest part of a simple cell.

Ninth day, 9 o'clock, A.M.: Temperature, 102°; pulse 115; rests well at night; bowels moved three times during the last twenty-four hours. Ordered treatment continued; surface to be sponged night and morning; bed-clothes must be changed every other day; all discharges must be removed at once, vessels to be rinsed with a solution of carbolic acid.

Eleventh day, 6 o'clock, P.M.: Temperature 102½°; pulse 120; bowels moved very often during the night; discharges mostly bloody, evidently containing sloughs of Peyers patches. Ordered opium in half-grain doses, every three hours, until diarrhœa is restrained; wine and milk-punch at stated intervals during the night.

Twelfth day, 8 o'clock, A.M.: Temperature 101°; pulse 105; has rested some during the night; no blood in the discharges this morning. Complains of being hungry; answers questions quite well. Ordered bread and milk diet, in such quantities as may seem harmless to the good judgment of the nurse; the acid mixture, with quinia, every four hours during the day; opium, 1 gr. at night, repeated every four hours, using only sufficient to secure sleep, taking care not to narcotize the patient.

Fourteenth day, 9 A.M.: Temperature 100°; pulse 98; rests well during the night; no diarrhœa; calls for food quite often; patient evidently thinks he must eat to live. As digestion of food is good, I now begin to withdraw the wine, giving plenty of sweet milk (and I dont take off the cream). Nurse reports remissions of the fever in the evening. Medicine is only a secondary object now; quinine 2 grs., every four hours during the day.

Sixteenth day, 10 A.M.: Temperature 98½°; pulse 84; bowels moved twice a day; complains of no pain; eats well. Treatment continued.

Eighteenth day, 8 A.M.: Temperature 96°; pulse 75; no fever; bowels moved once in the last twenty-four hours. No tenderness in the iliac region; sleeps well during the night; eats like a plow-boy. Treatment, quinia and acid.

Twentieth day, 10 A. M.: Temperature 98°; pulse 80; tongue is cleaning off; patient sits up, looking at his long, bony arms; says he thinks there is room for improvement. Can form no idea how long he has been sick, or what has happened; rests well at night; digestion good and rapid; fever has evidently run its career:

℞ Nitro-muriatic acid, - - - - - - - gts. xx

Three times a day. To be given in sugar and water.

Ordered the patient to be well fed.

Twenty-second day, 9 A.M.: Temperature 98°; pulse 80; rests well at night; tongue is cleaned off; has had no fever since my last visit; no tenderness on pressure over the abdomen; I consider there is no need to give the patient medicine now, and tell him so.

Now, let us look over the history of the case. I contend that typhoid fever was brought on in this case by filth, for the following reasons: There was not a case of typhoid within ten miles of his residence; there were no other cases of typhoid in his vicinity during the past fall. Of five persons who lived in the house, four contracted typhoid fever; all of the same virulent nature. And I will warrant to get up cases of typhoid fever to order for any one who wishes to make the experiment of living over the accumulated filth of years (during the summer months).

A word in regard to my plan of treatment. It may seem to some that my plan of treatment was simple; I think so too. Had I treated the case according to the name of the disease, the case would have slipped through my digits. Never treat a case according to its name or location, but according to what is the matter; referring, at all times, the treatment of the disease to the cause of the disease and the particular stage of the disease. What were the indications in this case? Eliminate during the first stage; obviate the tendency to death, and furnish material to repair the excessive waste of tissue that is going on. Nature removes the poison by elimination. We are but nature's hod-carriers; we furnish the bricks and mortar, nature repairs the structure. In treatment of typhoid fever, keep in view the grand fact, you cannot make something out of nothing.

ARTICLE VII. — *Absence of the Ductus Communis Choledochus.* By I. N. DANFORTH, M.D., Chicago.

SEVERAL years ago, while in practice in a New England town, I was employed to attend a woman in her third confinement. After an easy and natural labor of some four hours duration, she was delivered of a well-developed boy, weighing a little over nine pounds. For the twenty-four hours after birth, the child betrayed no abnormal symptoms. At my next visit, however (about thirty hours after delivery), I noticed an icteric appearance of the countenance, and upon closer inspection, a well-marked yellow tinge of the whole surface was discovered. The nurse informed me that the discharges from the bowels were "almost like clay," and that the child had frequent attacks of vomiting. During the afternoon of the succeeding day (nearly sixty hours after birth), the skin had assumed an intensely yellow color, and the stomach was in a very irritable condition; at the same time, there were evident indications of hunger — the child would seize the breast with avidity, but would almost immediately forsake it in disgust. The symptoms continued to grow worse; the color of the skin to changed to a brownish-yellow or bronze; the irritability of the stomach increased? convulsions supervened, and, in about twelve hours after my second visit, or seventy-two hours after birth, the child died in a state of profound coma.

Sectio cadaveris. — The tissues throughout the body were stained intensely yellow. The heart, lungs, stomach, intestines, spleen, and kidneys were all perfectly developed and healthy. The liver was swollen and enlarged, and this was evidently due to distension of the biliary ducts, as, upon cutting into it, an unusual amount of very thick bile oozed from the cut surfaces. The gall-bladder occupied its normal position, and was enormously distended with bile of about the consistency of syrup. The cystic and hepatic ducts presented nothing unusual, except that they were very much enlarged, a point I shall allude to again; they united at the usual place to form the common duct. The ductus communis choledochus — also very greatly distended — was about three-quarters of an inch long; it then terminated abruptly, in a very blunt club-shaped extremity, without reaching the intestinal canal at all.

Of course, the symptoms and cause of death were at once solved, upon making this remarkable discovery. The end of the duct presented a curious appearance; one might almost imagine that it had been suddenly cut off with a sharp instrument. Scarcely could a round billet of wood be sawn off with more accuracy and neatness.

I have already mentioned the great distension and enlargement of all the ducts. I could, without difficulty, pass my finger into the gall-bladder, through the cystic duct. Upon this point, Rokitansky remarks (Path. Anat. Vol. II., p. 124): "The gall-ducts are capable of extensive distension."

I have not been able to find any such case upon record, although I have carefully examined such authorities as came within my reach. Jones and Sieveking remark (Path. Anat., p. 525): "The gall-badder is sometimes wanting — in animals it has been found double; its shape may be variously deformed; its duct, as well as the common duct, may probably be imperforate." It is quite possible, however, that analogous cases may be found in medical journals of this, or other countries, which have escaped my notice. But such cases are sufficiently rare to warrant the publication of all which do unfortunately happen.

Foreign Correspondence.

PARIS, *December* 30, 1869.

IN a medical way every thing is now in full tide. The various learned societies are more or less occupied with discussions on the transmission of syphilis by vaccination; on the treatment of syphilis by mercury, or by hygiene, tonics and time.

A new chair, entitled, "History of Medicine," has lately been created at the medical school, after a somewhat stormy discussion among the professors.

One of the clinical professors of the faculty, on his return from his summer vacation, being informed that his house physician was having fair success in the treatment of typhoid fever by the

cold douche, said that he knew something far more efficacious. It consisted in putting the typhoid patient into a cold bath, and gradually reducing the temperature to a low degree. This was done to three unfortunate individuals, who very soon succumbed, and the professor quietly renounced his unsuccessful experiment.

As there is nothing of great interest to write concerning hospital service, we will give a part of a report presented at the Academy of Sciences, on the 6th of this month, by M. Andral, concerning the variations of temperature of the human body, with variations of some of the principal constituents of the blood.

The temperature was taken in the axilla. He said that when the blood contains more than four thousandths of fibrin the temperature rises. That the temperature and fibrin augment in direct proportion to each other. Thus, of all diseases which increase the quantity of fibrin, pneumonia causes the greatest excess, and it is this disease also which produces the most heat. In 85 cases of pneumonia, 13 times he found the temperature below 39° centigrade;* 44 times from 39° to 40°; 21 times 40°; once 41°; twice 41°2′.

In acute pleurisy he has always found the quantity of fibrin less than in pneumonia, and has seen the temperature only exceptionally surpass 40°, presenting for a maximum, in one case only, 41°. Most ordinarily it vacillated between 39°5′ and 38°5′.

In acute capillary bronchitis the fibrin is generally less than in pleurisy, and the temperature he has never seen exceed 39°.

In acute articular rheumatism, which, next to pneumonia, augments the most the quality of fibrin, he has never seen the temperature reach 41°. In this disease the maximum seen was 40°5′; generally it is between 39° and 40°.

Finally, although in some cases of acute pulmonary phthisis the temperature may reach 40°5′, it remains, in ordinary cases that have reached the stage of continued fever, between 38° and 39°5′, which is in rapport with the fibrin; the latter maintaining itself between four and five thousandths. This general fact has, nevertheless, its exceptions. Thus, in erysipelas, where the highest quantity of fibrin found was $\frac{7}{1000}$, he has seen the temperature rise to 41°8′. In other cases of the same disease it was 41°2′,

* All the degrees here used are centigrade. If the editor chooses, can give the rule for reducing centigrade to Fahrenheit.

40°6′, 40° and 39°. Other phlegmasias have presented similar exceptions — thus, 40° with only $\frac{4}{1000}$ of fibrin. There are, nevertheless, very large quantities of fibrin which he has only found with certain very high degrees of temperature. Such is the number 10, which he has only seen appear when the temperature had surpassed 40°. But, one may ask, what kind of rapport exists between this simultaneous increase of heat and fibrin? Is it a simple coincidence? Is it casualty? To this question the answer is easy, on account of there being one large class of diseases — pyrexias — in which the fibrin rests in its physiological limit, can even descend below it, and where the temperature is as considerable, and perhaps more, than in the phlegmasias which characterize an augmentation of fibrin. It is, in fact, in these pyrexias that he has found the maximum of temperature, viz.: 3 times 42°; once 42°4′. He found this last degree in a case of typhoid fever; that of 42° in the primary fever of variola, in the period of heat of an access of intermittent fever, and in a case of glanders in man.

He says that the fibrin does not augment in eruptive fevers; and, nevertheless, he has found, in the invading fever of small-pox, as a minimum of temperature, 40°; after, the numbers 40°5′, 40°9′, 41°, 42°; that is to say, numbers equal or superior to those observed in diseases where there is the greatest increase of fibrin.

In the invading fever of scarlatina he has found the temperature oscillating between 39° and 40°7′. It was less in measles, maintaining itself in the invading fever between 39° and 37°7′, and during the eruption between 38° and 40°5′.

From these results, he says, we may conclude that the increase of fibrin and of temperature are only two facts, which, in certain diseases, are produced together, without one depending on the other; that there is so little between these two facts, a rapport of casuality, that the augmentation of temperature is raised to its highest degree, in the morbid states of which one of the characters is a tendency to a diminishing of the plastic element of the blood.

He next examined the question, Does the quantity of globules exercise any influence on the temperature? The facts which are going to be exposed show that a diminution, even very great, of the number of globules, does not cause the temperature to

descend below the inferior limit of a physiological state. Sometimes, then, we see it approach this inferior limit; at other times rise towards the superior limit, and even surpass it a little.

A woman reduced by frequent and abundant hæmorrhage, caused by uterine cancer, had no more than 21 parts of globules in her blood; nevertheless, her temperature continued at 37°.

A man, very anæmic from long mercurial treatment, had only 87 globules in his blood. His temperature was 36°7′.

In a case of saturnine cachexia, where the number of globules were not more than 83, the temperature had risen to 38°.

A patient, affected with scurvy, had only 44 globules in his blood; nevertheless, he had a temperature of not less than 38°.

In chlorosis the same fact is seen; and, whatever may be the diminution of globules, the temperature does not descend below the physiological state, but, sometimes, even rises above it.

A chlorotic woman, who had 38 grammes of globules for 1,000 grammes of blood, had, notwithstanding, 37°9′.

The following table, proving the above assertions, shows number of globules and the temperature taken from twenty chlorotic persons:

GLOB.	TEMP.	GLOB.	TEMP.	GLOB.	TEMP.
38	37°9′	62	37°9′	104	37°0′
46	37°9′	64	37°0′	104	38°0′
48	38°4′	77	37°5′	112	37°7′
49	38°0′	86	37°5′	112	37°5′
49	37°6′	95	37°3′	113	38°0′
54	37°7′	97	38°1′	117	37°7′
56	38°0′	99	37°9′		

With these 20 cases the minimum degree was 37, and this only twice; with three it was 37°5′; with the 15 others it was between 37°6′ and 38°4′, without, in any case, the existence of an intercurring inflammatory lesion explaining these elevated numbers.

These facts prove, in a physiological point of view, that the red globules of the blood can vary much in quantity without the animal heat being modified; that, in a pathological point of view, these maximums of normal temperature, and even these commencements of morbid temperature with a certain number of chlorotic persons, enable us to comprehend those sensations of troublesome heat, as if febrile, which many of them *eprouve*, and

justifies, to a certain degree, the expression of "Fever of Chlorotic Persons," employed by some nosographs.

In my next shall expose his views in regard to albumen and urea.

A. W. Bosworth.

Paris, *January* 13, 1870.

Albumen.—In my last, I promised you the rest of M. Andral's report to the Academy. He said that when the albumen of the blood, instead of being completely employed for nutrition, is in part lost for it by its being passed off in the urine, theory would seem to indicate that less heat should be produced; and some facts here mentioned would authorize, if they were more numerous, that such were really the case.

In seven cases of albuminuria, where he noted the temperature, there were two having temperature notably below the normal state, being from 35° to 35° 3′; in thirty other cases, the temperature was from 36° to 36° 5′; in two cases there was elevation of temperature, being 38° to 39°. Of these two latter cases, in the first the albuminuria was complicated by an acute inflammation of the lymphatic glands of the neck, which terminated by suppuration. In the second, the temperature was taken at the beginning of the disease, which, contrary to the general rule, had signalized its apparition by symptoms of acute nephritis, with complication of erysipelas of the face; consequently, these two cases were only in apparent discord with the fifty others, their elevation of temperature having a sufficient cause.

The pathology of facts which he mentions prove that it is not immediately, but, on the contrary, after some time, that the insufficient albuminous material decreases the temperature in an appreciable manner. Thus, with convalescents who have just undergone dieting for a few days, we do not find the temperature so much diminished as might be expected. The lowest degree found in such cases was 36°7′; it was usually 37°, or between 37° and 37°5′.

The author has often been surprised to find that heat remained physiologically normal with patients affected with cancer of the stomach, who daily vomited the greater part of their food. Nevertheless, a moment arrives when the temperature, after having

long been maintained at a normal degree, in spite of almost complete absence of reparatory substances, diminishes suddenly. He has seen it thus fall in twenty-four hours from 37° to 35°.

These facts are in accordance with the experiments of Chossart. The animals, which he caused to die of hunger, maintained their normal temperature till two or three days before death, when it suddenly diminished.

Urea.—To decide whether urea contained in the urine augments during febrile diseases, is a much-discussed question. It is difficult to decide if we attempt to take for a starting-point the normal quantity of urea said to be in the urine, because that is yet only known in a very uncertain manner. Thirty grammes of urea for every 1,000 grammes of urine, given formerly by Berzelius, is evidently too high. Andral thinks from 10 to 14 and 15 grammes is the most that can be admitted. He believes to obtain more accurate results by examining comparatively the quantity of urea of patients having a normal temperature with those having it augmented. In fifty-three of the former cases, he only found eight times more than 8 grammes of urea to 1,000 grammes of urine, viz.: 14, 17, 22 and 23 grammes, in four cases of organic disease of the heart; 19 grammes, in one case of cancer of the stomach; 20 to 22 grammes, in three cases of cirrhosis of the liver. In the forty-five other cases, which only had absence of fever as the only similarity. the greatest quantity of urea was 12 grammes; the minimum, 4 grammes. In these fifty-three cases, the urea often varied in a notable manner, in the same patient, at short intervals. Ex.: In a case of disease of the heart, it was, within a few days, from 4 and 8 to 22 grammes. If we now compare the preceding cases with those having fever, we find with these latter a greater quantity of urea, a greater constancy of this quantity, and, in general, a proportional rapport between the quantity of urea and the degree of temperature. In these affections, all pyretical, he found, as a maximum of urea, 40 grammes — this in a case of urticaria, with much fever.

One of the morbid states in which the temperature is seen to rise most, is intermittent fever. In twenty-three cases of this fever, he found the urine to contain eleven times from 20 to 32 grammes of urea; nine times, from 16 to 20 grammes; twice, only, to fall below this last number, being once 11 grammes and once 13.

In pneumonia, the urea vacillated between 20 and 29 grammes, with the exception of one case, where it was only 9 grammes. In this latter case, the pneumonia affected only a small number of lobules, and there was very little fever.

Pleurisy, which augments less the temperature than pneumonia, gives, also, less urea. In pleurisy, its maximum was 18 grammes; then came the numbers 14 and 15.

In acute articular rheumatism, he found, when the fever augmented, there was, at the same time, an increase of urea, of which was found 18, 19, 20, 27, and 31 grammes. When the fever decreased, there was then only 16, 15, 14 grammes of urea. When it had completely ceased, the urea descended from 14 to 8 grammes; finally, after six weeks or two months, the patients, weakened by prolonged dieting, by extraction of blood, by pain, returned slowly to health, the urea, still diminishing, fell sometimes to 6, 5, 4, and even 3 grammes.

He had only three cases of *typhoid fever* to present. Here, also, the urea augmented with the temperature, and decreased with it. In the first case, when the temperature was 40°, there was found 28 grammes of urea in the urine. In the two other cases, when the temperature was taken in the decline of the disease, and was 38°5′, there was only 13 and 12 grammes of urea. From these cases, he is unwilling to accept the opinion of some authors, who state that, in typhoid fever, the urea diminishes instead of increasing.

We must not forget that diet acts in an opposite manner to fever; therefore it may happen that, when the fever has lasted a long time, the urea, without ceasing to be considerable, becomes less, the elevation of temperature resting the same.

He possessed only one analysis of the urine for eruptive fevers, which was confirmative of what has been here asserted. The urine contained 30 grammes of urea on the second day of the invading fever of variola.

The fever of phthisical patients offers a temperature generally inferior to that of the acute inflammations of fevers, and also gives a less quantity of urea. The greatest quantity found in phthisis was 14 grammes; the most frequently, 8 to 12 grammes; and, with some patients affected by this disease, when, having arrived at the last degree of marasmus, the urea had decreased, in spite of the fever, to 6, and even 4 grammes.

The radical weakening of the constitution, the prolonged, insufficient alimentation, the daily losses of expectoration, perspiration and diarrhœa, can explain how alone of all the febrile diseases, pulmonary tuberculation can raise the temperature, without always augmenting the urea.

It is more difficult to explain those inverse cases where, the temperature resting normal, the urea accidentally rises to those quantities found in a febrile state. The most diverse affections can present this anomaly, which must depend on some individual disposition of the patients.

There is, nevertheless, one morbid state, cirrhosis of the liver, in which, in the cases where he examined the urine, he found the urea increased. If other observations should confirm these results, we must conclude that, contrary to the other apyretic maladies, cyrrhosis of the liver increases the secretion of urea, not accidentally, but by its nature. If this exception exists, what may be its cause? Can we suppose that the azotized material of the bile, which, no longer being able to leave the blood through the altered tissue of the liver, finds a supplementary exit of elimination in the kidneys? This would be the inverse of what occurs when M. Claude Bernard, suppressing the renal secretion, finds an unusual quantity of highly azotized matter in the interior of the digestive canal.

M. Bouillaud then addressed the Academy, remarking that the results of his long researches perfectly coincide with what M. Andral had said.

Mr. Editor: In my next I may possibly give you some notes from Brown-Sequard. He is now lecturing on epilepsy. His course is not so well attended as might have been expected.

With kind regards, I remain your humble servant,

A. W. Bosworth.

The womb, according to Plato, "is a wild beast that obeys no reason, but which, when its desires are unsated, wanders about within the body, and excites all sorts of irregular motions." "Our ancient brethren," says Dr. Taliaférro, "believed the uterus to possess an independent existence, and the body to be but a cage for its confinement."

Editor's Book Table.

[NOTE.—All works reviewed in the columns of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. Keen and Cooke, whose catalogue of medical books will be sent to any address upon request.]

Obstetric Aphorisms, for the use of Students Commencing Midwifery Practice. By JOSEPH GRIFFITHS SWAYNE, M.D., Physician Accoucheur to the British General Hospital. From the Fourth and Revised London Edition, with Additions by E. R. Hutchins, M.D., with illustrations, in one neat royal 18mo volume; extra cloth. Chicago: W. B. Keen and Cooke.

"THE object of this little volume is to afford that kind of practical information which is required by the student or junior practitioner who is called upon for some acquaintance with the management of ordinary cases of labor. It has been undertaken by the author in accordance with a wish, often expressed to him by his pupils, and is founded upon his experience of the wants of those who are commencing midwifery practice. The very marked success which the work has met in England shows that he has succeeded in carrying out this object; and it is presented to the American profession in the hope that it will fill a similar want here of a volume which should present, in a concise form, and disembarrassed of unnecessary detail, the leading points of midwifery."

"The editor has added a few notes, and two chapters — one on abortion, and the other on the management of the new-born child, which seemed requisite to give completeness to the work."

Readers of the JOURNAL will recognize in the name of the American editor of this book, one of the frequent contributors to our pages within the last two or three years.

It is really a capital little compendium of the subject, and we recommend young practitioners to buy it and carry it with them when called to attend cases of labor. They can both while away the otherwise tedious hours of waiting, and thoroughly fix in

their memories the most important practical suggestions it contains.

The American editor has materially added, by his notes and the concluding chapters, to the completeness and general value of the book.

A Manual of Clinical Medicine and Physical Diagnosis. By THOMAS HAWKES TANNER, M.D., F.L.S., etc. Third American. From the Second English Edition. Revised and enlarged by Tilbury Fox, M.D., Physician University College Hospital, London. Philadelphia: Henry C. Lea. 1870. Pp. 366. 18mo. Chicago: W. B. Keen and Cooke.

How to find out: WHAT IS THE MATTER? is usually the most puzzling thing for the student, and a thing, unfortunately, too many old practitioners neglect.

As a concise and yet clear manual of what to observe, and how to make up a diagnosis from the facts presented, we cordially commend this little book as excellently well adapted for the every-day use of both students and practitioners.

Pamphlets.

Braithwaite's Retrospect. Part LX. January, 1870. Uniform American Edition. Pp. 329. New York: W. A. Townshend & Adams, Publishers. $2.50 a year in advance. Postage prepaid. Half-yearly parts, $1.50.

The American Journal of Obstetrics, and Diseases of Women and Children. Edited by Drs. NOEGGERATH, DAWSON and JACOBI. Quarterly. $4.00 a year. Postage free. Single copies, $1.25. W. A. Townshend & Adams, New York.

QUITE a number of monographs, etc., have been received, which want of space compels us to defer notice of until next month.

Editorial.

Rush Medical College.

The Twenty-Seventh Annual Commencement took place Wednesday evening, February 2, 1870, with the following order of exercises:

1. *Prayer*, by Rev. W. H. Van Doren, D.D.; 2. *Music;* 3. *Conferring Degrees;* 4. *Charge to Graduates*, by the President of the Faculty; 5. *Response*, by William R. Aydelott, of the Graduating Class; 6. *Music;* 7. *Valedictory*, by Prof. J. Adams Allen; 8. *Benediction.*

Names of Graduates:

Lyman J. Adair, ...Iowa.
Wm. R. Aydelott,.....Ind.
Geo. H. Aurner,.....Ill.
Thomas J. Adams,.....Ind.
George Theodore Acers,.....Iowa.

D. Bryan Baker,.....Ill.
C. A. Barnes,..... ...Ind.
Fred. T. Bicknell,.....Wis.
L. Lafayette Bond,..... ...Wis.
John Ellison Best,.....Ill.
Gilbert E. Bridgman,.....Can.
John Bloomingstone,.....Ill.
Cyril P. Brown,.....Mich.
Albert D. Ballou,.....Wis.
William J. Burns,.....Wis.
David O. Bennett,.....Wis.
Thomas Blakeslee,.....Ill.
William M. Boyd,.....Ill.

William L. Crowder,.....Iowa.
Wilson C. Carver,..... Ill.
Paul H. Curtner,.....Ind.
Thomas Coates,.....Iowa.
James McNab Cassels,.....Cana.
Lafayette W. Case,.....Iowa.
Howard C. Crist,..... Ill.

Michael J. Donnelly,.....Col'o.
Samuel W. Durant,.....Ill.
Samuel T. Davis,.....Ill.
Isaac R. Dunning,.....Mich.
Edward F. Dann,.....Wis.
Daniel L. Dakin,.....Mich.
John W. Dod,.....Ill.
Jacob R. Dosch,.....Iowa.

Hamilton P. Duffield,.....Ill.

Richard J. Eaton,.....Ill.
Milton H. Everett,.....Ill.
William C. Riehelberger,.....Ind.
Robert S. Edgar,.....Ill.
Perry M. Evans,.....Ill.

Abel Ford, Jr.,.....Mich.
William E. Fenwick,.....Mich.
Edward R. Fletcher,.....Min.
George S. Focht,.....Iowa.
S. Campbell Fenton,.....Ind.
William Fox,.....Wis.
Benjamin F. Farley,.....Ill.

Augustus H. Guernsey,.....Wis.
John Green,.. .....Ill.
George Green,. .. ..Ill.
Strader S. Goldsberry,.....Ind.
Samuel W. Gould,.....Ind.
John W. Goe,.....Wis.
Joseph C. Gifford,.....Ind.
Jesse T. B. Gephart,.....Kan.
O. G. Given,.....Kan.

William Henry,.....Ill.
Benjamin R. Helms, ...Ind.
Geo. Washington Hudson,.....Ill.
William Harvey,.....C. W.
Frederick C. Hageman,.....Ill.
Marcus M. Hale, ...Ind.
Thomas A. Holman,.....Ill.

Bishop B. Kelley,.....Neb.
Adrian A. Kitchingman,.....Wis.

Horace R. Littlefield,.....Ill.
August Liljencrantz, ...Wis.
Ledyard Verdine Lewis,.....Wis.
Clark Leal,..... Ill.
Benjamin F. LaRue,..... .....Min.
John M. Lester,.....Cana.
Frank L. Lewis,.....Min.
Allen R. Law.....Wis.
Lawrence A. Laurason,.....Mich.
Stephen W. Lee,.....Ill.

Phineas I. Mulvane,.....Ill.
William L. McLane,..... .....Ill.
Her. Walter Morehouse,.....Ill.
Andrew J. Moore, ...C. W.
George P. Morey,.....N. Y.
Pierre L. Monast,.....Ill.
James A. Matthews,.....Mo.
Samuel Miller,.....Min.
Simon P. Morse,..... .....Ill.
D. H. McFarland,.....Ill.
Albert B. Modesitt,.....Ind.
William O. Mendenhall,.....Ill.
Henry M. Marvin,.....Mich.
William J Moore,..... Ill.
Charles D. Manning,.....Iowa.
Julius A. Morris,.....Ohio.
T. Fletcher McFarland,.....Ill.
George B. Noyes,.....Ill.

Oliver C. Ormsby,.....Utah.

Milo Place,.....Ill.
Lewis C. Page.....Ind.
William H. Palmer,.....Ill.
Francis M. Pickins,.....Ind.
Robert O. Purviance,.....Ill.

Benjamin T. Phillips,.....Wis.
William B. Porter,.....Iowa.
Judson C. Panter,.....Ill.

Charles E. Quire,.....Iowa.

James C. Reynolds,.....Wis.
James W. Reeder,..... Ill.
Charles W. Russell,.....Ind.
Walter F. Randolph,.....Ill.

John Wiley Snider,.....Ind.
Zachary T. Stanley,.....Ill.
William H. Stewart,.....Ohio.
Theophilus Sprague,.....Ill.
William M. Smith,.....Ill.
Henry C. Soule,.....Wis.
James B. Stetson,.....Ill.
H. Watson Smith,.....Wis.
Conrad Secrest,.....Ill.
Lewis A. Snyder,.....Ind.
John H. Stewart,.....Ill.
Jacob D. Smith,.....Ill.
John T. Scott,.....Ind.

John W. Tope,.....Ohio.
Samuel L. Tyner, ...Ind.
J. Austin Thompson,.....Iowa.
William Todd,.....Cal.

Leonard P. Woodworth, ...Wis.
Delinso A. Walden,.....Ill.
Charles A. Wilcox,.....Ill.
John C. Webster,.....Ind.
Albert Wilgus,.....Ind.
John C. Waite,.....Ind.
Gideon A. Weed,..... .....Cal.

AD EUNDEM DEGREE.

Richard H. Plummer, M.D.,...Cal.
Louis Stoskof, M.D.,.....Ill.
David Dodge, M.D.....Ill.
J. F. Grimes, M.D.,.....Iowa.

HONORARY DEGREE.

Andrew McFarland, M.D.,.....Ill.

The spacious lecture-room was crowded, and great enthusiasm was manifested, culminating in repeated and tempestuous rounds of applause, when Dr. J. R. Dosch stepped forward and presented the veteran Prof. Freer, on behalf of the graduating class, with an elegant gold-headed cane. Dr. Dosch's remarks were in excellent taste, and Prof. Freer, although taken wholly by surprise, responded with feeling and eloquence.

We chronicle this Commencement as one of the most pleasant and auspicious in the history of the College.

Alumni Meeting.

The second annual meeting of the Alumni of Rush Medical College was held, February 2, at that institution. The meeting was called to order by the president, Dr. Alfred E. Ames, of Minneapolis, Minnesota. Dr. W. C. Hunt, secretary, read the minutes of the last meeting, which were adopted.

President Ames then delivered the annual address, which, we have only space now to say, was exceedingly able and interesting, and was listened to by a large audience with profound attention, except when interrupted by frequent applause.

The following-named officers were elected for the ensuing year:

President — Dr. Abner Hard, of Aurora, Illinois.
First Vice-President — Dr. R. C. Hamill, of Chicago.
Second Vice-President — Dr. V. L. Hurlbut, of Chicago.
Treasurer — Dr. F. A. Emmons, of Chicago.
Secretary — Dr. Samuel Cole, of Chicago.
Executive Committee — Prof. E. Ingals, chairman; Dr. Charles Parkes, Dr. S. J. Avery.

Profs. Miller and Allen, and Dr. W. C. Hunt, were appointed a committee on necrology.

The exercises were concluded by a highly successful series of experiments, illustrative of arterial pressure, transfusion, etc., by Prof. J. W. Freer, of which we hope to have a complete report hereafter. The annual reunion was a pronounced success.

Diplomas for Sale.

Some time last year, we referred to the fact that an agency for a certain "University" in Philadelphia, had been established in this city for the sale of diplomas of M.D., and we had authority for saying that several persons in this city and the surrounding country had availed themselves of the opportunity for their purchase. We have in our possession original documentary evidence of this fact.

It becomes now our unplesant duty, as a patriotic citizen of Chicago, to say that our enterprising neighboring city of Milwaukee has, for once, beaten Chicago at this game.

From a rejoicing applicant, we have received the following papers which fully explain themselves. (We omit the name of

the philanthropic "agent," as we do not propose to advertise him except at our regular rates, as established by the publisher).

The first is a card, with this on the obverse:

THE MILWAUKEE MEDICAL AND SURGICAL INSTITUTE, (Chartered by the Legislature of Wisconsin), office, corner of East Water and Mason Streets.

Collegiate Agency. — This agency has been established for the purpose of giving such information as is necessary, before taking any of the learned degrees in arts, science, law and medicine, and represents some of the best universities in America and Europe.

By or through its recommedation, the degrees of A.M. (Master of Arts), A.B. (Bachelor of Arts), LL.D. (Doctor of Laws), M.D. (Doctor of Medicine), D.D.S. (Doctor of Dental Surgery), etc, may be legitimately conferred.

For particulars, address the Principal.

MILWAUKEE, WIS.

And this on the reverse:

"Many States have passed laws prohibiting physicians, who are not graduates, from practicing medicine, collecting fees, or giving evidence in court on medical matters. All the other States will soon pass similar laws. Similar qualifications are required of surgeons of the U. S. Army. In view of the agitation of this question, and the facts that no physician without a diploma can be fully recognized as a *bona fide* member of the profession, and that it is a passport to good fellowship with his professional brethren and the confidence of the community, every practicing physician should be able to produce this badge of his profession."

The next is a printed circular, with same heading:

[CONFIDENTIAL.]

DEAR SIR: — In reply to frequent inquiries on the subject, by physicians, the following is published for the information and guidance of those seeking diplomas through the agency of this institution:

1. It is not the intention or object of the agency to confer degrees upon improper or incompetent persons.

2. The principal object of the agency is to secure, for the schools in which we are interested, students prepared to attend their second course of lectures. All schools feel a pride in exhibiting a large graduating class. Those schools which we represent being among the best in the country, the advantage is mutual.

3. The requirements for graduation, in all these schools, are three years' study, and two full courses of lectures.

4. In cases where it seems justifiable, some of the schools have decided to depart from this last rule, in so far as to confer diplomas upon physi-

cians who, although they may not have attended two full courses of lectures, have had sufficient experience in the study and practice of medicine to compensate for the deficiency. Five years' reputable practice without having attended lectures, or one course of lectures and three years' reputable practice, are considered as an equivalent. No one can doubt but that a physician who has been engaged in active practice for five or more years, is as much entitled to the degree of M.D., as three-fourths of the raw students who are graduated by all universities at the end of their second course.

This action of the schools, however, being "irregular," and rival schools always ready to seize upon any pretext to injure their reputation, it is necessary that the faculties should not be approached upon the subject; but all business of the kind must be strictly confidential, and transacted through their private agents, of whom we are the only one in the North-west.

5. It will be seen that we do not confer the degree, but act merely as a go-between the candidate and the schools. The transaction is closed when the diploma is conferred; and those who apply for and receive this information are bound in honor to regard it as confidential, whether they avail themselves of the privilege or not, and their application, on our part, will ever be held in sacred confidence.

6. EXAMINATIONS. — Examination of candidates for graduation may be by actual oral examination, by us, at the institute, in which such questions, etc., are propounded upon therapeutics, surgery, obstetrics, materia medica, chemistry, anatomy, etc., as would be asked by the faculty in the "green room."

Otherwise the examination may be merely *pro forma;* the presentation to us of proper evidence that the applicant has attended one course of lectures and practiced three years; or has practiced five years; a certificate from any medical society, or any two well known or respectable physicians (graduates) that he is a competent person to engage in the practice of medicine, will be accepted by us as *prima facie* evidence that he is properly qualified and we will file these credentials with the faculty, report that "we have examined the applicant, etc., and recommend him for graduation."

The third is an autograph letter, with same heading:

DEAR SIR: — Yours received. I can procure you a degree of M.D., without your leaving home, from one of the medical universities of Philadelphia. You must leave the selection of the school to me, as all of them do not grant degrees in this way. It will be from a respectable, well established and chartered school, signed and sealed by the faculty and officers, and your name enrolled on the college books — every thing the same exactly as if you went there and attended a course of lectures, and graduated; and in case of any difficulty, you may refer to the faculty, or in your cards.

The entire expense, including every thing, will be $150.00; of which amount, $50 must accompany the application, and when the diploma is sent, which will be within two weeks, it will be C. O. D., the balance $100; or you can send the full amount at once, and it will be sent.

The certificates, etc., may be dispensed with, on my recommendation but it will facilitate matters if you can send them. Yours truly,

———.

We beg leave to add only, at present, that medical legislation, thus far does not appear to have elevated the profession to any very admirable extent.

Ancient Sanitary Regulations.

As early in the history of England as A. D. 1500, the scavengers, constables and wards of the city of London were ordered, "on pain of death," to see all streets and yards kept clear of dung and rubbish, and all other filthy and corrupt things. Carts went round every Monday, Wednesday and Saturday, to carry off the litter from the houses, and on each of these days twelve buckets of water were drawn for "every person," and used in cleaning their rooms and passages. — *Guildhall MSS., quoted by Froude.*

Unique Diagnosis.

A FRIEND in DuQuoin sends us the following specimen of professional forces acting at a distance:

DUQUOIN, *Illinois.*

* * Received your letter dated August 22. Inclosed please find two vials of medicine, to be taken, according to direction, during the day. Commence with vial No. 1 and when finished with vial No. 2.

Your disease is a slimy upset on lungs and liver, general prostration of the whole nervous system, some hectic fever, dizziness in the head, pain in the sides and back, not much appetite, and no rest in night-time.

In regard to diet, nothing particular. Don't use strong drinks, as beer, wine or whisky.

Let me know, in fourteen days, what effect these medicines made on you. Respectfully, ***.

Portrait of John W. Francis, M.D., LL.D.

THE publishers of the New York medical and psychological journals have issued a splendid steel engraving of the late eminent and venerated Dr. Francis. It is superb, both as a work of art, and as a "speaking likeness."

There are few names on the roll of honor of the medical profession in this country that can rank with that of Dr. Francis — none surpass. *Nihil tetigit quod non ornavit.* Illustrious in the quiet walks of literature, accomplished as a *savan*, he was the idol of his patients, and the brightest ornament of the social circles in which he moved. The publication of his portrait in such a beautiful style, is a compliment to his memory at once merited and graceful.

It should be hung in the office of every American physician who loves and honors his profession.

The Scientific American.

We welcome this organ and index of the industrial arts and sciences to our exchange list, with the coming in of the new year, and have already marked passages for reproduction in our pages.

This splendidly illustrated weekly journal of popular science, mechanics, invention, engineering, chemistry, architecture, agriculture, and the kindred arts, enters its twenty-fifth year on the first of January next, having a circulation far exceeding that of any similar journal now published.

The editorial department of the *Scientific American* is very ably conducted, and some of the most popular writers in this country and Europe are contributors. Every number has sixteen imperial pages, embellished with fine engravings of machinery, new inventions, tools for the workshop, farm and household, engineering works, dwelling houses, public buildings.

A journal of so much intrinsic value, at the low price of $3.00 a year, ought to have, in this thriving country, a million readers.

Whoever reads the *Scientific American* is entertained and instructed, without being bothered with hard words or dry details.

Terms of *Scientific American* — One year $3 00; six months $1.50; four months $1.00. To clubs of ten and upwards, terms $2.50 per annum. Specimen copies sent free. Address the publishers,

Munn & Co., 37 Park Row, New York.

We most cordially indorse the *Scientific American* as filling a space between the professional and general newspaper, with exactly the kind of information which every intelligent professional man desires. We do not know where to look for an equal amount of valuable information in so small a space, and at so low a price.

The Western Monthly.

Devoted to literature, biography, and the interests of the West. Published by the Western Monthly company, No. 18, Tribune Building, Chicago. $3.00 per annum in advance.

This magazine has donned a new dress with the new year, and is filled with instructive and entertaining matter. We recognize articles from some of the ablest writers in the West. In its general appearance, size, arrangement, typography, etc., it closely resembles (*too* closely for our Western taste) the *Atlantic Monthly;* but there is a freshness, freedom and vigor about its contents which its heavy prototype at the "Hub" has not exhibited for many years. We take pleasure in recommending it as an especial substitute for the *Atlantic Monthly*, and similar "heavy weight" magazines from the far East.

The Pharmacist.

Our enterprising cotemporary commenced the new year under new auspices; Messrs. Ebert & Sargent, pleading the pressure of business cares, retire from its editorial management, in favor Mr. N. Gray Bartlett, who assumes its control. The new editor, well known as a writer and pharmaceutical chemist, will devote his entire time to his new vocation. In extending to him our hearty good wishes, in his new enterprise, we venture to express the opinion that, if he fills the position as well as did his predecessors, the *Pharmacist* will continue to be all that its most exacting readers could ask. W. H.

The Earth Closet.

ATTENTION is called to the advertisement of this great improvement, on the second advertising page of this number. In the next JOURNAL will be found a full exposition of the subject.

To Contributors.

SEVERAL valuable articles are on file for early publication. To secure prompt appearance, articles should be sent in not less than ten days prior to the date of issue of the ensuing number. A fortnight will be better still.

New Journals.

The American Practitioner, Louisville, Kentucky, and the *Baltimore Medical Journal*, reached us too late for further notice at present. Both are excellent.

THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery, and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.; AND WALTER HAY, M.D.

VOL. XXVII. — MARCH, 1870. — No. 3.

Original Communications.

ARTICLE I. — *Cases of Trichiniasis, and Successful Treatment.* By C. B. REED, M.D., *Hampshire, Kane County, Illinois.*

ON the 24th of last December, in the evening, I was called to see a family of Prussians, living on what is here called the Molony farm, situated in the extreme northwest corner of Kane County, and distant about seven miles from my residence.

As I must be brief, for several reasons, I will endeavor to give only what seems to me most important to medical men, of that which I saw, heard, and did.

I found a large two-story wooden dwelling-house, occupied by two families, one in each story. The messenger conducted me to the upper story, where I found four sick persons belonging to the family of Mr. Fritz Martens — Mr. Martens, Mrs. Martens, his wife, a child in the third year, his son, and a woman, fifty-six years old, his mother.

I investigated these cases as far as practicable that evening, renewing the investigation at an early hour on the following morning; and after a very careful and thorough review of all I

could gather, I was forced to believe that these persons were suffering from trichiniasis, and stated the fact to my patients. I also examined the meat used for food by the family, and assured them that it contained large numbers of trichinæ.

I was informed that, some time previously, a hog had been slaughtered for food; that the hams and fattest portions of the meat had been preserved in brine, while all the lean meat was made into a kind of sausage, which is eaten raw. Every one, so far as I could learn, who had eaten of the raw sausage, except two, who afterwards came under my observation as patients, were then sick; but no one eating of the cooked meat only had sickened.

I could learn nothing of the animal that should have excited suspicions of anything wrong.

Curiosity induced me to visit the lower story of the building, where I found four more persons suffering from the same disease, three of whom appeared near the end of the journey of life, and have since died.

Both families had been looked after by a Homœopath, for two weeks. More cannot be said in his favor, as he had, previous to this time (Dec. 25), given them no intimation of the nature of their ailment; but professed to be treating for bilious difficulty. I am sure that up to this date he did not know *what was the matter*.

My announcement of my diagnosis in these cases produced the greatest excitement in the neighborhood, and led to his dismissal, and upon my suggestion, another regular practitioner was called in to attend those in the lower story of the building. I thought that the responsibility of so many serious cases should not all rest upon one physician.

As all these patients appeared so much alike, only a general enumeration of symptoms would be interesting.

Every one complained of a very sore throat, without any swelling or redness, inability to protrude the tongue, which was swollen, with a red tip and edges, and a seeming tendency to the formation of a smooth, glossy strip along the centre; great difficulty in uttering articulate sounds; an entire loss of appetite, with little or no nausea, but very frequent eructations of wind; great thirst; diarrhœa, with very frequent evacuations, except in

the case of Mr. Martens' mother, who had not had a stool for a week — the stools appearing like those of typhoid fever, except in the case of Mr. Martens' son, who had large watery stools, reminding one of the operation of epsom salts. There appeared to be an utter inability to digest vegetable food, bread and other vegetable food in the solid form passing without more alteration than would be produced by a thorough soaking in the fluids.

There was a moist skin in all the cases, while some were covered with a profuse perspiration, though the temperature, taken in the axilla, ranged from 102° to 103½° of Fahrenheit. All had an eruption of a peculiar character, reddish in color, and very copious in most of the cases, the spots varying from a mere point to the size of a silver half dollar, and remaining till the patients recovered. There was a generally swollen condition of all the muscles, in most of the cases, and the fascia and sheaths of the muscles contained a large quantity of serous fluid, which gave the limbs a peculiar appearance that I do not remember to have seen elsewhere.

There was not much pain when all the muscles were quiet, though pressure caused pain at any time. Any movement of the muscles of the body and lower limbs was very painful. The muscles of the arms were not so bad as the lower limbs, nor were their movements so much restricted. The pulse was much accelerated; small and wiry where the bowel complaint seemed to take the lead, and not very full in any of the cases. Mr. Martens had pneumonia, and his mother had pneumonia and peritonitis. A constant wakefulness was a very prominent feature in all the cases.

I had no hopes of the recovery of Mr. Martens or his mother, from the first.

I helped Mr. Martens to break his Homœopathic fast with a spoonful of chicken soup, on the ninth day, and I am informed that one of those who died in the lower part of the house had not taken any nutriment for fourteen days.

Mr. Martens died on the 27th, in the morning, and his mother died on the 2nd of January, following. Nothing was done for Mr. Martens beyond an attempt to sustain the strength, and the administration of aquæ chlorinii a few hours.

His mother took six grains a day of carbolic acid, for four

days, which seemed somewhat to modify the disease; and she also took frequent doses of castor oil and turpentine, for the purpose of thoroughly clearing out the alimentary canal.

After her death a portion of muscle was examined microscopically, and found to contain a large number of living trichinæ—a very sufficient proof that the quantity of the acid given was not enough to kill the worms outside of the alimentary canal.

Mr. Martens' wife and child were the last persons on the premises who came down with the disease. They were as sick as any of the others, and as treatment has seemed to be successful, in their cases, I have no doubt it will be interesting, and therefore give its most important features:

℞ Carbolic Acid, - - - - - grs. xij;
Oil of Turpentine, - - - - - f℥j;
Tr. of Opium, - - - - - gtt. xc;
Gum Arabic, - - - - - - ℥ix;
Loaf Sugar, - - - - - - ℥j;
Water to make f℥vj of the mixture, of which f℥ss was to be given every two hours.

Two grains of quinine were given every eight hours, and a teaspoonful of alcohol, flavored with sassafras, and properly diluted, was given every six hours. A full dose of a mixture of castor oil and oil of turpentine was given every day, for a few days, as a cathartic.

When the emulsion had been continued about ten days, she became anasarcous, and it was omitted, and a diuretic mixture substituted.

She was in the sixth month of pregnancy, and had some œdema of the limbs before she became trichinosed. She miscarried January 10th, and all medicine was laid aside except two grains of quinine three times a day.

On the 16th I found the swelling of the limbs and dropsical effusion nearly gone, the soreness was not any longer apparent; and she did, in spite of my remonstrances, get up and go about the house. At this time she resumed her ordinary diet, which had previously been restricted to a very generous supply of animal food in the fluid form.

The only medicine directed at this time was ten drops of tincture of muriate of iron to be taken three times a day.

On the 19th, she was able to attend to her duties about the house, and was removed to the residence of friends at a distance.

It is proper that I should here acknowledge my obligations to Drs. Hagar and Stull of Marengo for timely and valuable suggestions in the case of Mrs. Martens, though they were not employed. The boy, son of Mr. Martens, who was in his third year, was treated with an emulsion containing somewhat more than the proportionate quantities of acid and turpentine, and a small quantity of paregoric instead of laudanum, with daily cathartic doses of castor oil and oil of turpentine; and a large allowance of animal food in the fluid form. His recovery was much more rapid than his mother's.

On the 29th of December, Mr. Charles Rathka and wife, who live about a mile from the Molony farm, applied to me for advice, they having eaten freely of the raw sausage while visiting at the Molony farm on the 20th. Mr. Rathka showed no other signs of the disease than very slight indigestion. Mrs. Rathka had sore throat, as she called it, indigestion, frequent eructations of wind, loss of appetite, a constant very disagreeable feeling in the stomach, some soreness of the muscles, an accelerated circulation, an increased heat of the surface, and a coated tongue, red at the tip and edges. I gave each one a cathartic of castor oil and oil of turpentine, with half a grain of carbolic acid, to be followed by one grain of carbolic acid dissolved in water every six hours. On the 30th, not perceiving any improvement, I gave both of them a cathartic of castor oil and oil of turpentine, to be followed by one grain of carbolic acid dissolved in mucilage of gum Arabic every hour, to be continued until both had taken twelve grains of the acid.

Treatment was then discontinued.

On the 2nd of January Mr. Rathka was well, and his wife had only a slight stiffness about one ankle, which soon subsided; and they have both remained well up to this time.

Results may be stated as follows: two deaths and three recoveries, (not counting Mr. Rathka); though as no hopes were entertained of the recovery of Mr. Martens and his mother from the first time that I saw them, I do not think their cases should be counted in summing up results.

I am indebted to the politeness of my friend and former pre-

ceptor, Dr. Joseph Tefft, of Elgin, for a microscopic examination of the portions of meat and muscle previously referred to, and for an estimate of the number of trichinæ to the square inch in a portion of ham that I sent him, which according to his estimate was about eight thousand.

The Doctor also has my thanks for the opportunity he gave me of seeing the worms alive with his excellent instrument.

ARTICLE II. — *Reply to a Criticism of Z. C. McElroy, M.D., President of the "Muskingum County Medical Society," in Relation to an Article, by the Writer, upon the "Physical Basis of Life,"* by H. CULBERTSON, M.D., Assistant Surgeon U. S. Army, retired, Zanesville, Ohio.

EARLY in December last we read an article on the "Physical Basis of Life," before the above-named society. Its president, the gentleman named, has criticised, in the *Chicago Medical Journal*, certain qualities mentioned in the paper, which we believe to be peculiar to *organic life*, and has attempted to show that these all depend on "form" and "motion."

It may be premised that, if it is not the object of this gentleman to establish a system of medicine, based on "form" and "motion," and not a mere classification, his essay is worthless as a medical production, and deserves no comment as an *iconoclastic* effort. *Classifications* aid greatly in the acquirement of knowledge, but are far different from a SYSTEM based upon assumed or proven principles.

As, however, it is manifest, from a reading of this gentleman's paper, that the object is to inaugurate a SYSTEM OF MEDICINE on two of the qualities of matter, viz.: "form" and "motion," all the other properties of matter are at once ostracized by the very nature of this assumed predicate, "form" and "motion."

To proceed: "Form," from *forma*, "abstractly a figure," (in this connection) relates to contour, the external, of bodies. Thus we speak of the "form" of crystals, of hepatic cells, etc., meaning, thereby, simply their figure. With this plain definition of "form" in view, the objections to the attempt to establish a scientific system of medicine, based, in part, on "form," are:

1st. That as "forms" (organic) are composed of particles, there is a point in the origin of organized bodies, when the matter of which they are composed becomes invisible, naturally and artificially. Hence, to support this form-doctrine, as a life-basis, it is necessary to assume that "form" does obtain behind the visible "form," when it cannot be proved; and this, it is claimed, is unscientific. The outlines of organic "forms" might be this or that, when beyond our inspection; and as the microscopic field is enlarged, units are resolved into compounds, and new features are developed in life previously unsuspected.

But the ultimately visible "granule" of the life-cell, does not possess definite "form." Inclining to curved lines, it is not uniform in its figure, and hence we can predicate no *definite* system of medicine on the *indefinite* "figure" of a germ-life-granule. The diverse "forms" of individual classes of life-cells corroborate this view: Tesselated epithelium is circular, polygonal, or irregular;* the "form" of fat vesicles is globular, oval, or polygonal;† cartilage-cells are irregular in size and shape;‡ and air-cells vary in size and shape, but incline to an angular "form."§ Such diversity in the cell-figure of typical life-structures, refutes the value of any system based on "form."

2nd. The fact that this ultimately visible "form," being actuated by a power to appropriate that which is proper for its maintenance, loses and gains particles continually, and hence, therefore, cannot *strictly* be possessed of the *same* "figure" at these formative and destructive periods of the life-"form;" and the fact that this action is accomplished on particles of life-matter of diverse "form," adds weight to this argument.

3rd. The fact and conclusion that "form" being the result of *force* and *figure*, the basis of this system of medicine, we are precluded from considering the *power* which actuates the "form," as contour is the basis; and the instant we begin to contemplate the *other* qualities of matter, as inertia, divisibility, compressi-

* *Hassall's Mic. Anatomy*, Vol. I, p. 265.

† Ditto, Vol. I, p. 254.

‡ Ditto, Vol. I, p. 307.

§ Ditto, Vol. II, Plate xlviii, Fig. 3.

bility, expansibility, porosity, (but not mobility, by this system,) we are without the pale of this figure-basis, and our consideration of these qualities of matter in general leads to the conclusion that the "form"-basis is inadequate as a scientific basis in medicine, or the act would not have been done.

4th. The fact that all the other qualities of a life-"form" do not emanate "from" *figure*, is an objection, as the basis of a system here should be that from which all the other qualities spring. It would seem probable that definite "form" is not necessary that life-qualities may be manifested, and incorrect to maintain that without "form" none of the physical qualities of matter could be developed in a life-body, the truth being that matter, force, and the qualities of matter *in general*, are required in this relation.

5th. The consideration that figure, being only the exterior, and the basis of this system, histology and pathology become of secondary importance, as the investigation of the interior structure is, by the nature of this *figure*-basis, logically debarred.

6th. The fact that, as physicians, our attention being constantly directed to the *exterior*, by this system, will create in us a tendency to lose sight of the organic *interior*, and thus will we neglect the internal operations of an organic body, and be led to ignore our natural desire to look beyond the "figure" into the *structure*.

7th. The fact that, in organic generation, the ultimately visible germ (which has no uniform figure) develops so many structures having *different* "forms;" and that this diversity cannot be accounted for on any law of "form."

8th. The fact that organic generation takes place by cleavage of "form," or the introduction of the material quality, "divisibility," is an argument against this "form"-basis as a sole foundation in relation to this subject.

9th. The fact that this system ignores causes (is based on figure), and investigates alone effects ("form" is the result of *force*), is prejudicial to progress in medicine, and opposed to our imperative duty, in the cure of disease, to look for causes, and is not equal to our present system, which considers the exterior, the interior, and causes.

9th. The fact that the visible features of the infant are so

changed as not to be recognized in the adult, though the last proceeds from the first, is a potent argument against any doctrine based on "form."

10th. The fact that in certain varieties of paralysis the muscular fibres retain their "form," but the *structure* presents fatty degeneration,* leads to the conclusion that although the "form" is unaffected, the *structure* may be, and hence this "figure"-basis does not meet all the circumstances attending such a transformation. And, again, in simple hypertrophy, although the "form" is unchanged, being only enlarged, its mere increase of size (or "form") may lead to disease.

11th. The fact that if "form" be understood to mean "idea" (one of its definitions), a system of medicine based on such a "form," would be founded on an *immaterial* characteristic, and hence would clearly not be established on a "physical basis."

For these reasons, and others which might be given, it is claimed that a scientific system of medicine cannot be established on "form."

The objections to "motion," as the basis of a scientific system of medicine, we believe are as follows, it being understood that "motion," *moteo*, means "change of local position:"

1st. That the test "motion" will not enable us to define the *modus operandi* of medicines, and hence, were it the basis, it would still be necessary to depend on the *experimentum crucis* to solve this point.

2nd. The conclusion that the motion, in an organic body, cannot be so rapid in its molecular action, as to destroy it, by tissue-rending, and hence, that simple "motion" cannot account for molecular death. Thus the most rapid growths, as fungi, developing by millions per minute, reach perfection (yet die soon); and in the human body the impetus of the fluids in disease, over that in health, is not sufficiently great to give rise to maladies by mere velocity. Such rapid development as is seen in the growth of fungi, would destroy many objects in the physical world, and yet does not the fungi.

3rd. The conclusion that, in cholera, and several adynamic diseases, there is rapid waste-"motion," *with lowness of temper-*

* *Gross Surgery*, Vol. I, p. 252, first edition.

ature, when in physics *increase* of temperature obtains from augmentation of "motion;" and hence the *reduction* of temperature, observed in cholera, does not comport with one of the laws of physics, and should not, therefore, be the basis of a *physical* system of medicine.

4th. The conclusion that secretion cannot be induced in a glandular organ, while inflamed, (under excessive motion) and until its excitement has been reduced, or from *diminished motion*, results *increased action* (the secretion), is contrary to a law of physics, for *diminished heat* should induce *diminished* motion.

5th. The conclusion that, in certain stages of many diseases, the rapid circulatory "motion" denotes debility, not strength; and yet, by this "motor" theory, the more rapid the motion the greater should be the strength, when the truth is, in the animal body, the slower (within a certain range) the motion, the greater is the strength; and hence the rejection of this "motor"-basis, as not in consonance with another of the laws of physics.

6th. The fact that certain medicines *diminish* motion (*digitalis* on the heart), but *increase* strength, when, on this theory, such agents, in *diminishing* action, should *decrease* strength, is opposed to this "motion"-basis, and another of the laws of physics.

7th. The conclusion that "motion" takes place in vegetables and cold-blooded animals, unattended by the development of heat, demonstrates that this peculiar motion does not agree with one of the laws of mobile bodies, and hence "motion" should not be the basis of a *physical* system of medicine.

8th. The conclusion that as "motion" is only the effect of a force, any system of medicine based on it precludes (for it is unnecessary) the consideration of the *cause* of the "motion;" and should we investigate the cause, we are without the limits of the basis; and as the tendency is to consider causes, it is unscientific to systemize on *effects*, in lieu of *causes*, as a basis in medicine.

9th. That the destructive changes observed in some diseases cannot be accounted for by "motion," for the *increased* circulatory speed, observed in some *active* maladies, is not *sufficiently* more rapid than the normal "motion" of a life-body, to account for the *rapid* waste. Thus, in acute dysentery, though there is

rapid waste, "the pulse, in the majority of cases, is but little, and sometimes not at all, accelerated."*

10th. The conclusion that the effects of tonics take place without perceptible *increase* of normal organic "motion" (as iron upon the red globules), is opposed to this basis in medicine.

11th. The conclusion that emetics increase gastric "motion," but relax the cardiac sphincter, is opposed to this "motion"-basis, as such agents must act solely to increase or decrease "motion."

12th. The conclusion that the increased *motion* from stimuli, cathartics, diaphoretics, diuretics, and antispasmodics (as chloroform), fails to account for the *diminished motion* observed subsequent to their use; or the increased strength often resulting from sedatives, and always from natural sleep; and hence "motion" will not account for these phenomena, and should not constitute a medical basis.

13th. The conclusion that when astringents act mechanically, by coagulating fluids, the solid particles closing pores, the introduction of a "mechanical" quality is needed to render the action of such agents efficient, and shows that "motion" alone is insufficient as a basis in this relation.

14th. The conclusion that simple "motion" will not account for the fact that the effects of medicines *decrease* by use, when in physics the *same* force applied always produces an *equal* effect.

15th. That simple "motion" does not account for the *elective* affinity displayed by medicines on various organic bodies; nor for the effects of the same alkaloid, *e. g.*, of opium, when given to pigeons and man. Thus, narcotina, which has been taken by man, in doses of 120 grs., with impunity, when given to pigeons subcutaneously, in two grain doses, produces their death.†

It may also be stated here that therapeutic agents have, long since, been classified, on the basis of "motion," by the late lamented Prof. Robley Dunglison.

These considerations seem to warrant the conclusion that a *scientific* system of medicine cannot be based on "motion."

Will a union of "form" and "motion," conjointly, enable us

* *Flint's Practice Medicine*, p. 351, third edition.

† See experiments of S. Weir Mitchell, M.D., *Hays' Journal*, January, 1870.

to found a *scientific* system of medicine? It is claimed these qualities will not enable us to do this, for the following reasons: The forces which produce organic "form" and organic "motion," are different in nature. The one is engaged in the particular *arranging*, the other in the *propulsion* of particles to be deposited. They are antipodal. The "form-force" develops a tendency to fixation, while "motion" presents a quality of destruction in the form. Suppose each of these "forces" could act in a right line — they would *always* continue *parallel*, unless *harmonized* by some intervening "force;" so, in an organic "form," these forces cannot *act as a unit* without the intervention of some *power*. Thus considered, "motion" and "form" cannot constitute the basis of a scientific system of medicine.

It seems obvious, too, that when either of two propositions are erroneous, the union of the two cannot establish truth; or "two wrongs will not make a right." Thus, if "form" and "motion," each viewed independently, does not develop respectively a scientific system of medicine, the union of these physical qualities will not accomplish this object, especially when it is shown that they cannot act as a unit without the operation of an intervening force. It would also seem well to remember here that, even did this "form" and "motion" system permit its author to call to his aid, in the erection of his doctrine, *all* the *physical* qualities of matter, it is necessary, to render the forces of matter harmonious in life, that there should be present a *positive independent force* to effect this unitarian result.

Three remarks of Dr. McElroy should be noticed:

1st. "Motion is the simple unit of force."

Motion being the result of force, and the latter being primary, it seems difficult to comprehend how "motion can be a unit of force;" *i. e.*, "a known determinate quantity, by the constant repetition of which any *other quantity* of the *same kind* is measured."* By this definition of *unus*, it can be understood that there may be a unit of "force," or of "motion," but it would seem impossible that one (force) can be a unit of the other, as they are *not* of the *same kind*.

2nd remark. "Our power over 'form' is *nil*, but our power over 'motion' is considerable."

* Olmstead's definition.

No one will deny the latter clause, but the former may be questioned. Organic forms being composed of particles, and constantly undergoing molecular changes, formative and destructive, it would be astonishing if such a form could not be influenced. Thus the general form of the body is influenced by external causes. A young and delicate boy enters the engineer corps, is exposed, has much exercise, eats and sleeps well therefrom, and grows rotund, large and solid, instead of the meagre boy. Again, certain Indian tribes flatten the heads of their children, that they remain so for life, and yet the brains of such distorted objects continue to perform their functions well. By the use of cod-liver oil we improve the *embonpoint* of our patients, and by the use of tonics we give power to digestion; and thence the nutritive system is improved, and the body enlarged. Starvation, too, diminishes the bulk of the body, and alcohol enlarges it. Further illustrations seem useless, but it seems proper to remember that what is here observed in *bulk*, takes place, in *minutiæ*, in organic bodies.

3rd remark. "Function depends on form." *Functio*, here the "office of any particular part of the animal body," is the result of "force," not of simple "figure." That the figure of a body may exercise some influence on neighboring parts (as pressure of one part against another, or by the interposition of organic substances) seems plain; but it is not supposed that such minor agencies give origin to the force which enables a part to perform a certain duty in animal life.

It would seem almost self-evident that the numerous organic structures, so similar in "form," yet performing such vastly different functions, would be an unanswerable argument against the doctrine that function depends on "form." That "form" may modify function, seems true; but it is claimed that "function" always depends on "force."

It remains to reply to the criticism of Dr. McElroy. In so doing, the peculiarities of life, as presented by myself, will be noticed as "Peculiarity." the criticism of the doctor as "Criticism," and the reply as "Rejoinder."

1st Peculiarity — "ACTIVITY, contra-distinguished from simple motion, and this presenting often, to our observation, as opposed to the operation of physical laws."

The above is an exact quotation from the original paper, and on which the following criticism was made. But, in the article as published, to express the idea more fully, the word "spontaneous" was prefixed to "activity."

"*Criticism:* Activity is a quality of motion; it is, in fact, motion — nothing more."

Rejoinder: "Activity" (spontaneous), from *ago*, "to drive gently or forcibly," implies the operation of some force which produces phenomena, and it embodies a quality of volition. It implies the presence of a power capable of setting bodies in motion, and bringing them to a state of rest. Motion is the simple propulsion of bodies, without power to change the direction of the propelled body. Motion is, therefore, passive. "Activity" (spontaneous) is volitional. Thus viewed, how can a volitional quality become a quality of simple motion, when the motion is the result of a volitional force, and only one of the phenomena of a life-body developing spontaneous "activity?" Or how can the greater be included in the lesser? It seems plain that motion may be a quality of activity, but not activity of motion, and that "activity" (spontaneous) is something more than mere motion.

2nd Peculiarity — "INDIVIDUALITY, which causes even like particles of matter to present different features."

"*Criticism:* The simplest element of individuality must be in form or forms."

Rejoinder: If admitted that "form" is the simplest element of individuality, such a definition would be imperfect, as it considers only the element "figure," neglecting even the force which gives origin to such organic peculiarities, and falling short of our mental conceptions of individuality, and dictating the conclusion that individuality is something more than "form."

3rd Peculiarity — "'REPRODUCTION,' or a perpetuation of INDIVIDUALITY."

"*Criticism:* "Reproduction, stated in its simplest terms, consists in form and motion."

Rejoinder: In the perpetuation of the individual, common and peculiar qualities of organic life are propagated. To claim, therefore, that these, in their "simplest terms," are "form" and "motion," ignores all the other qualities of life, which has already

been shown in this article, is unscientific, and of no practical value, even were the statement admitted to be true.

4th Peculiarity — "IMMUTABILITY, or the maintenance of life, notwithstanding all the changes which take place in an organic body."

"*Criticism:* Maintenance of 'form,' with perhaps incessant, or perhaps frequent molecular changes." Also claims that organic bodies are not strictly immutable.

Rejoinder: It is claimed that beings can possess a *quality* of immutability, and not be strictly *immutable* — a quality possessed, in perfection, by the ALMIGHTY alone. Thus it was applied to organic bodies, to denote that while such structures were constantly undergoing molecular changes, the being still lived through this immensity of material change. It would also seem clear that in order that "form" may be maintained, with incessant molecular changes, something more than mere "figure" and "motion" is necessary that these qualities may be maintained.

5th Peculiarity — "SENSATION, or the appreciation of bodily states and wants."

"*Criticism:* That is, sight, hearing," etc. For the appreciation of these bodily states or wants, "a nerve mass or patch" is necessary, "and nerves and motion." "The simplest element of sensation is 'form' and 'motion.'"

Rejoinder: The statement that a "nerve patch" is necessary that sensation may take place, is well known. But this renders the subject no more clear, for it is still asked, what gives rise to the phenomena of sensation in the "nerve patch?" The "form" of the gray matter will not explain the mystery, for there are forms of gray matter, so far as figure is concerned, precisely like those in which this quality is developed; in which the phenomena of *motion* alone is observed, or motor and sensory centres. And, further, simple motion will not explain the peculiarities of sensation; and hence sensation cannot be accounted for on the basis of "form" and "motion."

6th Peculiarity—"The quality of PERCEPTION."

"*Criticism:* That is knowledge through the medium of bodily organs, which must have 'form and motion' in their molecular structure, or perception can not take place."

Rejoinder: Even if admitted that *definite* "form" and motion is necessary, that perception may take place, it will be essential to prove how the simple "figure" of, or motion in, an organic body, can induce the diverse phenomena of Perception.

7th Peculiarity—"The quality of INSTINCT, and in man."

8th. The faculty of REASON.

9th. The faculty of CONSCIOUSNESS; and

10th. The WILL, and mental and moral phenomena in general.

"*Criticism:* These several qualities are each merged into 'form' and 'motion.' Instinct depends on 'form' and 'motion,' and intellect on added brain matter, having a definite and peculiar 'form,' and manifested by molecular motion. The other mental qualities here stated depend on added brain matter."

Rejoinder: The 7th, 8th, 9th and 10th peculiarities are here considered under one head, as they can all be met by one argument. Thus Dr. McElroy reduces them all to form and motion, and he associates them with "nerve patches."

Such peculiarities do not, of course, arise in bone or muscle. But because they are developed in nerve tissue, this fact does not explain the how these phenomena are produced; and unless this be solved (the latter), no new light is shed on what has already been learned by present systems; and hence the uselessness of adopting such a system as "form and motion." Again, this reduction ignores the qualities of matter in general, which is unscientific. Further, the assumption that reason, will, intellect, depend on brain matter, added to that amount of brain necessary to develop instinct, is refuted, from the simple fact that instinct relates to our bodily wants and protection, but the will, intellect, reason, it may be, to matters entirely foreign to the "physical." The one is occupied alone in protecting the individual, the other travels throughout the universe in its operations, and criticizes even the nature of this very "instinct." It is claimed that the simple multiplication of instinct can never produce, through "form" and "motion," the immensely varied phenomena, as to quality, observed in the will, reason and intellect.

While Doctor McElroy has shown much ingenuity in proposing and maintaining this "form and motion" system of medicine, and great boldness in the enunciation of his peculiar tenets, he has failed to convince the members of the "Muskingum County Medical Society" that his doctrines are founded in truth.

The great *desideratum* in the erection of a system of medicine based on physical laws, is *facts*, and these have not been, and must be furnished, ere our profession can be grounded upon physical data.

ARTICLE III.—*Address before the Alumni Association of Rush Medical College*, February 2, 1870. By A. E. AMES, M.D., of Minneapolis, Minn., President.* Published by request of the Association.

GENTLEMEN: Called by the voice of the Alumni of the Rush Medical College to this chair, emotions of sincere thanks well up from my soul for the distinguished favor conferred.

By the rules of our association, the president is required to give an address.

> "Speech is morning to the mind;
> It spreads the beauteous images abroad
> Which else lie furled and clouded in the soul."

It is customary on occasions like this, to congratulate and to welcome your return home. Friends and brothers greet you with the warm grasp of the hand; and, with joyous hearts, enlivened with thoughts of the pleasing memories of the past, you have met here to renew acquaintance, to revive in memory the pleasant days in college—to tell each other your trials, and of your professional life made since you left dear old Rush.

How oft have our minds returned to college days, to call up in memory the pleasant intercourse with students, our relations with teacher, the kindness of treatment, the courteous conduct and pleasant demeanor—each have joyed in such remembrances.

Those days with each of us were so full of thought and aspiration. Before each stood the future as unknown; the periphery, like a faint line of light, quickened hope for a profitable position—for good friends, for wealth, and for happiness.

How earnestly did our beloved professors labor to instruct us in the various branches of a medical education. Perhaps none

* Dr. Ames was the first graduate of the College.

of us have forgotten their warnings and advice given when we went forth from this college to make a life in our profession.

The notes of my journey before me lie:

> "I turn the leaves back faintly,
> The pictures of the past arise;
> Strange forms go by—in memory
> Sweet voices whisper."

In early life, for a short time your speaker was permitted to sit at the feet of a gifted teacher. Since that time, for a period of twenty-six years, he has lived on the frontier—away toward the setting sun, where there was but little to refine in the moral way; and yet in that district Nature was young and very beautiful. That locality has changed, and it is now fully under the influences of industry—of the arts and sciences; onward to scenes more glorious.

On this occasion it may be profitable to turn our minds back for a few years. The achievements of the past have been wonderful—change has rapidly succeeded change for possession and riches. The fair fields of Nature—the prairies of the Northwest that once were so gorgeously ornamented with violets and flowers—now yield golden harvests of grain in great profit to the husbandman. The narrow, winding foot-path made by the red man has been lost, since the railroad has been built, which is now our highway of travel and for commerce along the valleys, across the plains, and over the mountains—and the slow penny-post and coach, through storm, sunshine and mud, at the speed of twenty miles a day; now the mails are transmitted by railway, hundreds of miles a day, and communications are sent by lightning—*instanter*. Many of us have witnessed the adaptation of physical forces, during these decades, to supply the wants of man. We have lived in a famous day of improvements. Our hearts are glad, and our souls are astonished in beholding the great changes.

> "A mighty realm is waking at our feet
> —— to life and beauty,
> —— where millions shall meet,
> And Peace shall reign in majesty sublime."

Chicago, in the year 1836, was a town of 3,000 inhabitants, streets without bottoms, with a cosmopolitan or a heterogeneous composition of races of mankind. Her position was right, the country south, west and north of this locality of the best in virginity on the face of the globe. As the fair land began to change from an uncultivated to a cultivated state, so the city of Chicago began to develop, commerce began to whiten the waters of the great chain of lakes with laden wealth from her port, the railroads soon reached forth to connect her with other cities and districts, and day by day, and year by year, Chicago has astonished the wide world with her growth and commercial strength. Chicago is now a city of 300,000 inhabitants — a marvel to the world. Those who have had doubts in regard to her development have rolled up their skeptical maps and mathematical errors and laid them one side. Chicago is the centre of trade for a great agricultural and manufacturing district — a commercial centre — a home for the fine arts — the seat of education. She bears these honors with becoming grace. Behold her palatial residences, fragrant gardens, ornamental parks, public grounds, streets and boulevard walks — all so beautiful. The public bridges, water and gas works, driveways, balconies, and pavilions, are ornamental and useful; the productions of an intelligent, a wise, and a live people.

"The school-house and church rose side by side."
"Thus moves the tide of great events."

In this unparalleled growth of a city and the development of a country, it is of interest to know and realize that the moral and intellectual faculties of the people have kept pace; that the arts and sciences have lent their strength in the great change; and the virtue and peace of the inhabitants have been strengthened; home, the place of rest, made more secure.

The question is often asked, have these glorious achievements in the arts and sciences — the building strong cities and the developing a nation of nations during the last quarter of a century — resulted in great good and happiness for our race? or have our people been weakened in their moral and physical forces? The evidences are of their great ability. Perhaps you may inquire, how is it with the profession of medicine? and what are the

evidences of the onward progress of the science of medicine? Time will fail to mention many of the evidences of the achievements of the science of medicine made during the last twenty-six years. There are a few persons present here to-day who listened to the first medical lectures given by the lamented Brainard in this city, in his office on South Clark street, in the winter of 1841 and 1842, on Anatomy, Physiology, and Surgery, while he was Professor in the St. Louis University.

The first regular course of lectures of the Rush Medical College was commenced in two rooms on South Clark street, to a class of twenty-two students, December, 1843. Prof. Daniel Brainard, the President of this College, held two chairs; Prof. James V. Z. Blaney (now President) held two chairs; Prof. John McLean one, and Prof. M. L. Knapp one chair. This was the beginning — the lectures were good, never better given in any amphitheater. Since that time great changes have taken place in Professors, buildings and conveniences. Wise and good men have been called as teachers, to wit: Profs. John Evans, Austin Flint, Graham N. Fitch, Wm. B. Herrick, Joseph W. Freer, J. Adams Allen, Ephraim Ingals, DeLaskie Miller, R. L. Rea, Edwin Powell, Moses Gunn, Joseph P. Ross, and Edwin L. Homes, all qualified to teach; gentlemanly, social and kind — *a tower of strength.* To-day it is a proud position to fill either chair in this College.

No College promises more to the student than the Rush Medical College. In an early day its influence was felt throughout the sparsely settled Northwest. Many persons at that time were practicing medicine of a necessity, without a diploma from any institution, or sufficient qualifications. Many of those were men of good character and great energy. They were in the range of the influence of this College. These men were by the regulations of this College induced to come in and attend lectures, four years of reputable practice having been allowed as the equivalent of one course of lectures. Some attended but one course and graduated respectably; but the majority, of their own accord, convinced of their deficiences, attended a second, and some even a third course, before presenting themselves as candidates for the honors of this Institution.

This regulation, though objected to by some at the time, proved

to be in the end an efficient means for the elevation of the standard of attainments among the profession of our country. Each of you will remember the strict and rigid examination you were required to pass in order to obtain your diploma; in your practice, the profit of attending lectures here — especially if you have practiced medicine alongside of other medical gentlemen who were educated elsewhere. Here you became acquainted with the phases of diseases peculiar to this geographical division of our common country, and how to treat them.

It is a fact, go where you please in the medical colleges on the Atlantic and the Pacific coasts, and of the cities of the Middle States, you can not find a more appreciative class than the one in attendance here this session, nor can you find better clinical teaching in any college in America than in this.

Again we are proud to say, that those of our Alumni who were surgeons in the great rebellion, acquitted themselves with honor. None performed better service, as can be proven by their clear records in the office of the Surgeon-General of the United States army.

Since the organization of this college about 1,400 students have received honors of graduation.

The first college building cost $3,500, and was occupied Nov. 5, 1845, and was used during the course of lectures for the session of 1845 and 1846. At that session the Faculty was full.

Soon that building was found to be too small. In the summer of 1854, the first building was enlarged at the expense of $10,000.

During the summer of 1867, the old building was found insufficient; and this elegant edifice was erected and dedicated with appropriate ceremonies to *Science and Humanity*, October 2, 1867.

Gentlemen: This, as a college building, is unequaled in America — an evidence that the science of medicine is keeping pace with other signal developments.

Perhaps you, my kind friends, may not think it wrong for me to say a few words of him whose fame has gone into all lands; that Professor Daniel Brainard's foresight and great energy did more than any one man to build up this College. My tongue was never learned to speak eloquent words, or to pronounce obituaries for the great and good, yet for the love we bear to his name, it is

my privilege to award great credit to his memory — to the brilliant operator — the surgeon. He was the founder of the Rush Medical College. This edifice is a monument to his labors, of his attainments, his faithfulness to the principles of his profession and of his renown.

None who ever heard him speak can forget his fervency in address—his gentlemanly and courtly manners—ever kind, genial, and true—an example to all who would live the life of a manly man and a teacher.

This stately edifice is his monument—ye are his building. "He died like a man, and fell like one of the princes." The poet Dowler well said of *him* whose name is so dear to science:

> "In labors great, in knowledge deep,
> His work well done—let Brainard sleep;
> Erect his tomb hard by the lake,
> Where waves on waves resounding break,
> And chant upon the shelly shore
> His requiem, for ever more."

Another of those whose labors in the earlier days of this College contributed largely to its success, has passed away from earth. A generous and social gentleman, an enthusiastic student and teacher, beloved by all who knew him, was the late William B. Herrick. As an anatomist he had but few equals. As a teacher of physiology, his expansive mind could not be confined within the narrow limits of the books. His acute perceptions, and his unusual powers of generalization led him to teach *truths*, ideas and theories far in advance of his day, many of which find their full confirmation in recent discoveries and observations.

Peace to his ashes! and honor to his memory!

As yet, every interest in our country is youthful and promising. Placed in such a field of activity, with so much to do for city, country, humanity, and God, no one should "sit idly waiting for some noble work to do." Then let us encourage every effort for the education of our people, make useful the arts and sciences, cultivate grains, fruits and flowers, build towns, cities, schools, churches, colleges, and railways. The records of our country—of war, of education, of peace and of life—tell of the noble deeds of those of our own number, who were educated here. The joy of my heart is

full on this occasion, in contemplating the changes wrought in this fair land since the year 1836; thankful to see so many of the Alumni present—to have the privilege of meeting in a temple so beautiful. When the science of medicine is taught by learned men—courteous, manly—*their works praise them.* All of these noble men are members with us.

The science of medicine represents all sciences. "The arts are grouped in beauty near with thoughtful science, who their work commands."

Our studies have prepared us for other duties beside those of social life. It is marvelous that

> "Immortal genius in one day should cause
> Art and science to spring to birth.
> Genius pointed her scepter toward the waste
> Of hill and dale, and far-extended plain."
> The inventor has been busy with his plan
> To lighten toil to will of man.
> The discoverer has found the pathless way,
> As truth divine has led the way.

So that the farmer gathers his golden harvest with machinery; toil is lightened by giant powers.

There is another field of pleasure and usefulness. Nature is grand—comprehensive, a system of many circles, each dependent upon the other—ever so minute and delicate in grade—with harmony in action in crystals, plants, animals, man:

> —"The chain is love,
> Combining all below and all above.
> Nothing stands alone.
> The chain holds on—
> With thoughts well freighted,
> The chain holds strong embrace."

Our studies qualify us for the examination of the elements, the various forms of life, the manipulations of the world without, as well as the world within us.

To the younger members of alumni, we give you a glad welcome to membership. Despise not the day of small things; little by little, step by step, success will attend you in your enterprise. It is early morning with you; hence, arise and shine, and make your own summers.

> " Pleasant thoughts in the day dream of life,
> When youth and ambition join hands for the strife."

You have drank at the crystal fountain. You are now qualified to join in the march of fame. If you are good anatomists, you will soon become good physiologists, pathologists and surgeons. Never permit yourselves to become "rusty" in your knowledge of anatomy. When you prescribe a dose of medicine, do it in accordance with your understanding of the laws of chemistry and the laws of life. To become proficient in your calling, pay strict attention to your books. You will find great pleasure in your study of physiology. There is no scene that will gratify you more than that when you behold those mysteries of life. Be cautious in your conclusions, and modest in your opinions. Consult your books often; they are your friends. We would have you to be good citizens; to take active duties in civil life; to take a noble part in any good work that will give character to yourself and your profession.

> Changes are pluming mighty thoughts—
> Thoughts that wing their way far onward,
> Onward to scenes more glorious.

If you have an opportunity, teach the young; such opportunities offer in graded schools. Be always ready to assist in regulating civil society; in establishing schools, seminaries, churches; and in caring for the unfortunate. Please to ennoble labor in nature's plan. It should be virtue's brightest diadem. Speak kind words to the new beginner in our profession, and support those who are just entering upon the profession. This is the golden rule:

> Walk erect, like men.

So conduct yourselves as not to become involved in political strifes—sectarian animosities. Demean yourselves manly to the young and old—to the rich and poor—to all men. Have mercy, have charity, have liberal views, that you may bless all, and God will bless you.

You are about to take the first steps that will form your character. Every act—the manner you spend your time—the attention you give your profession and your home, will form your

character. You will stand as representatives of the medical profession. Then, be careful—let your demeanor be just, liberal, wise, kind and professional.

If you err, perhaps it will be for a want of a proper division of your time. Have a time for every duty—use little moments with strict economy. The little savings will make you rich. Keep notes of your cases. Give yourself a clinic on every case you have. If an epidemic prevails, make notes of all of its peculiarities—report important cases—your inventions and your discoveries to older minds, previous to publication. Such faithful labor will lead you to wealth, to honor, and to a good reputation.

You have been honored with graduation, and received as members of alumni. Your aspirations have begun already to mount up—anxious to take active duties.

With pride, the older members have received you as members of this Association, and with pride we can commend you to your calling.

Before you is your life—the rainbow of hope is spanned. Will your pathway be pleasant and profitable? or will it be beset with trials, dangers and temptations?

Our education, above all others, fits us for social life, for a fine appreciation of love, of virtue, of honor, of integrity—for a large and a comprehensive view of the duties of life that elevates the mind.

Dear friends, there is a lion in the way—*insobriety*. Good and noble men have been wounded by him. He is a monster—a dragon. If thine eye is not dim, behold the moral and physical destruction made on the human race. That happy family, whose hearts were as buoyant as the morning breeze, and as happy as the bird that flits thereon—a change is wrought. Their souls are now chafed and deranged. Around that sublunary haven, where once gently wafted the soft and spicy breezes of true love and friendship, the atmosphere is now glistening with the chilly dews betokening the approach of winter. No sunny face or sparkling eyes greet you. Children are there taught the broad road to sin. If thine ear is not heavy, where once was heard the prayer of praise, is now cursing; where once the notes of joy were sung, and the harp notes stealing, is mourning, sobbing, and crying; and where once the trowel of devotion spread liberally the cement

of love and harmony, now angry and discordant passions reign as the tyrant of the realm, scattering confusion, disease, misery and death. Shipwreck is made of virtue, of hope, and of joy. Misery is in the post of peace.

Be assured, a perverted pleasure or principle produces a corrosive trouble.

Gentlemen: We have taken an impressive survey of the achievements of the past, and viewed them in their blended lights and shades, and seen that the small town has become a marvelous city. The vast, uncultivated prairies now yield plentiful harvests, wealth and commerce active, and medical science developing new truths. Medical men have caused the lamp of knowledge to send forth its fair rays of light to shine away the clouds of error and superstition, that ignorance and human woes might give place to health, peace and happiness. Its light beams brighter, revealing the true economy of life.

Around the man of learning,
The arts and sciences at command,
To lay richest treasures at his feet.

Let us see to it that the honor, the reputation and the usefulness of our Alumni are on the side of genius. That the true light that shineth away the darkness, that guides the intellect in the way of invention and of discovery, and enables the mind to bring into use the elements for the support and protection of our race.

You will soon return to your fields of labor.

Home is the dearest place on earth;

Make yourselves pleasant homes; ornament them with fruits and flowers—

"With margin green and beautiful,"
With roses and nodding lilies,
To gladden the sunlight of smiles.

In your pleasant homes, forget not to cherish in your minds in a becoming manner a true love for "Rush."

"From the heart's sunshine, a ray often mounts,
To break on the lips with a smile;
Many a word from the lips we love much,
Strikes a chord of love's true emotion."

Ever will it be my prayer that God will bless this temple, this college, its graduates, and all true members of our noble profession everywhere.

When time with us is no more, may one and all be admitted to the banquet and the joys of heaven.

ARTICLE IV. — *Aortic Aneurism — Pathological Specimen.*
By F. J. VANVORHIS, M.D., Stockwell, Indiana.

DURING the winter of 1868–9 I procured a subject for private dissection, in which there was an aneurism of the arch of the aorta of such unusual size as, in my judgment, to be worthy of record.

Subject was a man about 55 years old, 5 ft. 4 in. high, and weighed about 180 pounds.

The thorax was opened in presence of my student, Mr. J. T. McShane.

The aneurism was also seen and examined by Dr. M. Baker, and his students, Mr. Wells and Mr. Cowan.

The aorta was dilated from within one inch of the aortic valves to the middle of fifth dorsal vertebræ.

The following measurements will give some idea of size and shape of the aneurism:

Circumference of aorta, just outside of the pericardium, $8\frac{3}{4}$ inches. Innominata artery completely obliterated, and right subclavian and right common carotid separated $1\frac{1}{4}$ inches.

Circumference of aorta between these vessels, $9\frac{1}{4}$ inches; between right and left common carotid, 9 inches; between left common carotid and left subclavian, $8\frac{1}{4}$ inches; about the middle of descending part of arch of aorta, $6\frac{1}{4}$ inches.

Aneurism was ruptured one inch posterior to the origin of left subclavian.

As near as could be judged, the right ventricle was increased one-half in capacity, and its walls very thin and flabby. The capacity of left auricle was at least doubled, and its walls very thin. The left ventricle was considerably dilated. The walls were

thinner than natural, and contained patches of calcareous matter, as did the coats of most of the arteries.

The right common carotid was two or three times its normal size. Femoral arteries so small as to appear almost impervious.

No history of the case could be obtained. The physician in charge of the case did not detect the aneurism, but supposed death occasioned by pneumonia. The want of a previous history deprives this case of all interest, except what belongs to a pathological curiosity.

Original Translations.

ARTICLE I.— *Analysis of a Case of Imperfect Bisexual Hermaphrodism in Man.* By DOCTOR E. GOUJON, Laureate of the Faculty of Paris. From Robin's Journal de l'Anatom. et de la Pysiol., etc., Nov. and Dec., 1869.

IN the course of the month of February, 1868, a young man employed in the administrative department of a railroad, committed suicide by carbonic asphyxia, in a mean apartment upon the fifth floor of a house in the Rue de l'Ecole de Médecine. M. Regnier, one of the municipal physicians, and the commisary of police of the district, informed of the fact, repaired to the residence of the suicide, and found upon a table a letter left by him, in which he stated that he had sought death to escape the sufferings which constantly beset him. These gentlemen, from the external appearance of the body, and from the information which they gathered from the janitor of the building, who saw the young man every day, suspecting nothing which could indicate the sufferings to which he alluded, concluded to examine the genital organs, supposing that he might be suffering from some syphilitic affection which, as is well known, frequently plunges its victims into profound marasmus and great mental depression, which often drives to suicide certain subjects already naturally melancholic.

M. Regnier, at this examination, detected immediately a remarkable anomaly of the external genital organs, and recognized a case of masculine hermaphrodism of the most striking character. In truth, it would be difficult, as will be seen by what follows, to find a mixture of the two sexes carried to a greater extent, in all that pertains to the external genital organs. I was informed of the case by Dr. Duplomb, who, like myself, regretted that the incident should be lost to science, and together we urged M. Regnier to use all his influence with the commissary of police, to induce him to permit us to make an autopsy, and to remove the different parts involved in the anomaly. This permission was granted to me on condition that there should be associated with me some physician having official position; the presence of M. Houel, adjunct to the Faculty, was secured, to whom, as well as to Dr. Regnier, my thanks are due for the disinterestedness with which they abandoned to me completely the investigation of this remarkable case. The case which I shall report is certainly one of the most complete of its kind which science possesses. Since the individual, who was its subject, can be traced up so to speak, from his birth, until his death, and since the examination of the body as well as the autopsy could be made with all the care desirable. The report is especially complete, from this exceptional fact, that the subject took care to leave us long memoirs, in which he initiates us into all the details of his life, and of all the impressions which were produced in him, at different periods of his physical and intellectual development. These memoirs* have so much the more value, inasmuch as they emanate from an individual possessed of a certain amount of culture (he had a certificate as instructress, and had received the first place in the competition at the Normal school for its diploma) and endeavoring to account for the different impressions which he experienced. The position of this person is not without its parallel. Indeed, there may be found in Geoffrey de St. Hilaire, observations which exhibit great analogy with those which I report.

The hermaphrodite, whom we are discussing, was inscribed upon the civic registers as belonging to the female sex; he was

* M. Tardieu having become possessed of these memoirs, has, with his usual complaisance, consented to communicate them to me.

reared with young girls, in the midst of whom he passed his infancy and his youth. The physical modifications which were developed subsequently forced him to demand a correction of the civic registration, which definitely returned him to his own sex, which was masculine, although upon a superficial examination of the external genital organs one would have been much more disposed to class him amongst the women: we quote a passage from his memoirs, in which he enumerates rapidly his different positions: "From my arrival in Paris dates a new phase of my double and perplexing existence. Reared during twenty years in the midst of young girls, I was at first, and during two years at most, chambermaid; at sixteen and a half I entered upon the situation of assistant teacher (*éleve maitresse*) at the Normal school of ———; at nineteen years I obtained my certificate as instructress (teacher's certificate); some months after I directed a boarding-school of some note in ———. I left it at twenty-one years; this was in the month of April; at the end of the same year I was in Paris on the ——— railroad."

The autopsy which we were enabled to make, enabled us to correct the first decision made as to his sex during the greater portion of his life, and to confirm the accuracy of the diagnosis, which had, in the last place, replaced him in his true social position.

After what has been said, it will be seen that the present case raises many physiological and medico-legal questions. The conformation of the external genital organs of this individual permitted him, although he was manifestly a man, to play in coition the part of a man or woman indifferently; but he was in either case sterile. He was enabled to perform the part of a man in this act, by means of an imperforate penis susceptible of erection, and attaining at that time the dimensions of the penis of many regularly conformed individuals. As will be seen later, by its description, this organ was rather a voluminous clitoris than a penis; indeed, sometimes the clitoris in woman will attain the size of the index finger. Erection could be accompanied by ejaculations and by voluptuous sensations, as he informs us in his memoirs. This ejaculation did not occur from the penis which was imperforate, as has been already indicated. A vagina, terminating in a *cul-de-sac*, and in which the index finger might be inserted without resistance, permitted him to play equally well

the part of a woman in the act of coition. To this vagina, situated as it is ordinarily in woman, were annexed vulvo-vaginal glands opening on each side of the vulva, and by the side of the opening of two other small conduits, serving for the emission or ejaculation of semen.

I had made the anatomical description of the subject of this report, when I learned from M. Professor Tardieu that this unfortunate had been the subject of a medico-legal report of a distinguished physician of Rochelle, at the time when the civil tribunal had been required to pronounce the judgment which should modify his civic *status* and replace him in his true sex. This report being very accurate and well drawn, I give it entire, and should have little to add thereto, as far as concerns the external genital organs, had not some modifications supervened during the time which separated the two examinations. The following is the report as it appears in the *Annales de Médecine légale*:*

"I, the subscriber, Doctor in Medicine, residing at la Rochelle, Department of la Chareute Inférieure, state the following to whom it may concern:

"A child, born of the married couple B., at St. Jean-d'Angely, the 8th of November, 1838, was declared at the civic registration to be a girl, and although registered under the names Adelaide-Herculine, her parents acquired the habit of calling her Alexina, a name which she has continued to bear up to this moment. Placed in female schools, and later, in the normal school of the Department of la Chareute-Inférieure, Alexina secured, two years ago, a teacher's certificate, and performed the functions in a boarding-school.

"Complaining of pains which she experienced in the left groin, it was decided to subject her to an examination by a physician who could not repress an expression of surprise at the sight of the genital organs. He communicated the result of his observations to the mistress of the school, who endeavored to tranquilize Alexina, by telling her that what had been observed belonged to her organization, and that there was nothing about which she

* *Annales d'hygiene et de Médecine légale.* 1860. 2nd séri, t. xiv., p. 206 — Question d'identité; vice de conformation des organs genitaux externes; — hypospadias; erreur sur le sexe, par le docteur Chesnet (de la Rochelle).

should be alarmed. Alexina, preoccupied, however, with a sort of mystery, of which she perceived herself to be the object, and with some expressions which escaped from the physician during his visit, commenced to scrutinize herself more attentively than she had hitherto done. In daily intercourse with young girls of fifteen to sixteen years, she experienced emotions which she controlled with difficulty. More than once during the night her dreams were accompanied by indefinable sensations. She felt herself moistened, and discovered, in the morning, grayish stains upon her linen.

"Surprised, as well as alarmed, Alexina confided this novel state of her mind to an ecclesiastic, who, no less astonished, doubtless, induced her to take advantage of a journey which she was about to make to la Rochelle, where her mother resided, to consult the bishop.

"She, in fact, presented herself to the bishop, and at the termination of this visit, I was instructed to examine Alexina with care, and to give my opinion upon her true sex. From this examination result the following facts:

"Alexina, who is in her twenty-second year, is of dark complexion; her height is 1.59^{m} (5 ft. $2\frac{1}{2}$ in.) The features of her face present nothing very characteristic, and remain undefined between those of a man and those of a woman. The voice is habitually feminine; but at times, in conversation or in coughing, there are mingled with it tones grave and masculine. A slight down covers the upper lip; some hairs of beard are perceptible upon the cheeks, especially upon the left. The chest is that of a man; it is flat, and without any appearance of mammæ. The menses have never appeared, to the great distress of her mother and of the physician whom she has consulted, and who has found his entire skill powerless to superinduce the appearance of this periodical flow. The upper limbs have not the rounded form which characterizes those of well-formed women; they are very brown, and slightly hairy. The pelvis and the hips are those of a man.

"The sub-pubic region is furnished with the most abundant black hair. If the legs are separated, a longitudinal slit is perceived, extending from the sub-pubic eminence to the border of the anus. At the upper part there is a peniform body, four to

five centimetres in length from its point of insertion to its free extremity, which has the form of a glans covered with a prepuce, slightly flattened below, and imperforate. This little member, as far removed by its dimensions from the clitoris as from the penis in its normal state, can, according to the statement of Alexina, swell, harden and elongate. However, the erection, properly speaking, can be only limited, this imperfect penis being bound down inferiorly by a sort of bridle, which leaves only the gland free.

"The labia majora, apparent as may be observed upon each side of the slit, are very prominent, especially the right, and are covered with hair. They are, in reality, only the two halves of a scrotum remaining divided. They are, in fact, manifestly felt to be, upon handling them, an ovoidal body, suspended to the cord of spermatic vessels. The body, a little less developed than in the adult man, seemed to us to be nothing else than the testicle. Upon the right it had altogether descended. On the left it had remained higher; but it is movable, and descends more or less when it is pressed. These two globular bodies are very sensitive to pressure when it is somewhat strong. It was apparently the tedious passage of the testicle through the inguinal ring which occasioned the severe pains of which Alexina complained, and rendered necessary the visit of the physician, who, learning that Alexina had never menstruated, exclaimed: "I believe it; and she never will!"

"At the distance of a centimetre below the penis, is an urethra entirely feminine. I introduced into it a sound, and permitted the escape of a small quantity of urine. The sound being withdrawn, I induced Alexina to urinate in my presence, which was accomplished by a vigorous jet, directed horizontally to the outlet of the canal. It is very probable that the semen might also be ejected to a distance.

"Lower than the urethra, and at about two centimetres lower than the anus, is found the orifice of a very narrow canal, into which I could have succeeded in introducing the extremity of my little finger had not Alexina withdrawn, and seemed unable to bear the pain. I then introduced a female sound, and ascertained that this canal was five centimetres in depth, and terminated in a *cul-de-sac*. My index finger, introduced into the anus,

detected the point of the sound through the walls which might be termed recto-vaginal. This canal is, then, a sort of vaginal outlet, at the bottom of which no vestige of a uterine neck can be detected. My finger, carried very high into the rectum, could not, through the parietes of the rectum, detect the uterus. The thighs and the legs, on their posterior portion, are covered with an abundance of black hair, as in the most hirsute man. From the above facts what shall we conclude? Is Alexina a woman? She has a vulva, labia majora, a female urethra, independent of a sort of imperforate penis. May not this be a clitoris monstrously developed? There is a vagina, very short indeed, very narrow, but, in fact, what is it if it is not a vagina? These are all feminine attributes. True, but Alexina has never menstruated; all the exterior of the body is that of a man. My examinations have not enabled me to detect a womb. Her tastes, her inclinations, attract her towards women. At night, voluptuous sensations are followed by spermatic emissions, the stained and thickened. To sum up, finally, ovoidal bodies, a cord of spermatic vessels are manifest to the touch in a divided scrotum. "These are the true evidences of sex. We may, therefore, conclude by saying: Alexina is a man; hermaphrodite, without doubt, but with evident prodominance of the masculine sex. Its history is, in its essential parts, the nearly complete reproduction of a case narrated by M. Marc, in the *Dictionaire des Sciences Médicales*, in the article, 'Hermaphrodite,' and cited, likewise, by Orfila, in the first volume of his *Médicine legale*. Marie Marguerité, of whom these authors speak, has solicited and obtained, from the tribunal of Dreux, the rectification of her sex upon the civic registers."

At the time when I proceeded to the examination of the cadaver, the report which I have just read had been made eight years, and the individual who was its subject, was in his thirtieth year.

The following is the condition which this unfortunate being presented in his miserable retreat, similar to which too many exist still in Paris, to be removed perhaps by the incessant progress of hygiene. A miserable pallet, a little table, and a chair, formed all the furniture of the place, in which four persons could scarcely stand. A little earthen furnace, in which only

ashes remained, was found in a corner by the side of a rag containing wood charcoal. Upon the bed, the body was placed upon its back, partially dressed; the face was cyanosed, and an efflux of black and frothy blood occurred through the mouth. The height was the same as that noted in the report of M. Chesnet; the hair was black, quite abundant, and fine; the beard was equally black, but was not very abundant upon the lateral portions of the face. It was much thicker upon the chin, and upon the upper lip. The neck was small, and quite long, and the larynx was but little prominent forward. The voice, according to information gathered from those who had seen him, was not strongly vibratile. The chest had the ordinary dimensions and conformation of that of a man of this height, and no hair could be found upon it except around the nipples, which were black, and but slightly prominent. As to the breast, there was no more than is usual in a man of the same degree of fatness.

The lower and upper limbs were covered with very fine black hair, and the muscular protuberances were more decided than they are in women. The knees were not inclined towards each other; the feet and hands were small; the pelvis was not more developed than it should be in man.

STATE OF THE GENITAL ORGANS.

Upon the mons-veneris, which was prominent, there was an abundance of black hair, long and curled, which covered, also, the perineum, and the parts which simulated the labia majora, completely surrounding the anus — an arrangement which is altogether absent in women. In its normal position is seen a penis, regularly inserted, of 5 (1.95 in.) centimetres in length, and of $2\frac{1}{2}$ (.97 in.) centimetres in diameter, in its flaccid state. This organ was terminated by an imperforate glans, flattened laterally, and completely uncovered by prepuce, which formed a crown at its root. This penis, which did not exceed in volume the clitoris of certain women, was slightly recurved beneath, being retained in this position by the inferior portion of the prepuce, which is finally intermingled with and lost in the folds of the skin which form the labia majora and minora.

A little below the penis, and in the same position which it occupies in the female, was found an urethra analogous to this

latter. It is easy to introduce through this, a sound, and thus to reach the bladder, which we emptied in this manner. Lower than the urethra was seen the orifice of the vagina, and at the moment when we made the examination, there was a slight efflux of blood from the vulva. Doctor Regnier, who also recognized it, believed that it was occasioned by the repeated introduction of the finger.

This was indeed the only explanation admissible for this phenomena, the subject of the inquest never having had, as has been already explained, periodical effusions of blood from the vulva; and the examination of the internal organs readily furnishes the explanation of this.

The index finger could be readily introduced throughout the whole length of the vagina; but nothing was felt at the extremity of the finger which recalled the uterine neck. There was recognized, on the contrary, a *cul-de-sac.*

The length of this vagina was 6½ centimetres (2.5 in.) Upon the lateral portions, and throughout its whole length, the touch detected two small hard cords, placed below the mucous surface, and which were, as we shall describe hereafter, the ejaculatory ducts which finally open, one upon each side of the vulvar orifice. The vaginal mucous membrane was smooth and much injected, and was perceived to be covered, over its whole extent, with tesselated epithelium, such as that which invests the female vagina. The existence of little follicles was determined in the thickness of this mucous membrane. Near the vulvar orifice were found some circular folds of mucous membrane, but they do not suggest, by their arrangement, the existence of a hymen. In the space comprised between the folds of the prepuce, which hold the glans downward, and the vulvar orifice, were found quite a large number of small orifices, of excretory canals of glands situated beneath, and by compressing slightly the skin of this region, a gelatinous, colorless matter could be expressed from these little holes, which was nothing else than inspissated mucus.

The anus was situated 3½ centimetres from the vulva, and presented nothing abnormal. Upon each side of the erectile organ (penis or clitoris), and forming a veritable groove, in which this lay, were two voluminous folds of skin, which were the two lobes of a divided scrotum. The right lobe, much more voluminous

than the left, contained, evidently, a testicle of normal size, and of which it was easy, through the skin, to trace the cord up to the ring. The left testicle had not completely descended, a large portion being still engaged in the ring.

EXAMINATION OF INTERNAL ORGANS.

Upon opening the body, it was seen that the epididymis alone of the left testicle had escaped from the ring. It was smaller than the right. The vasa deferentia approximated behind and below the bladder. They had normal relations with the vesiculæ seminales, whence arose the two ejaculatory ducts, which made their exit and penetrated under the vaginal mucous membrane of each side as far as the vulvar orifice. The seminal vesicles, of which the right is a little more voluminous than the left, were distended with semen, which was of normal color and consistence. Microscopic examination of this liquid exhibited no spermatozoa, either in that taken from the vesiculæ, or in that from the testicles. Moreover, in that testicle which had passed the ring, and in the corresponding vesicle, some voluminous round bodies were seen, which resembled the mother-cells of the spermatozoa, or male ovules of M. Robin. It was easy to unroll the tubuli of both testicles, and the microscope showed nothing abnormal in that of the right side, but in that of the left, which was partially in the abdomen, the tubuli were fatty, and the parenchyma of the testicle had a yellowish tint that the other had not.

A little canula being placed in each of the vesiculæ seminales, I introduced an injection of milk in order to ascertain positively the direction of the ejaculatory ducts. This milk escaped, by jets, at the orifice of the vulva, upon each side, as I have already indicated. The bladder, in its normal position, was large. Distended by an injection of water, it extended above the pubis. Nothing suggested by its form the presence of ovaries or uterus. There was recognized, however, much above the *cul-de-sac* which forms the vagina, a thick, fibrous patch, upon which were displayed the vesiculæ seminales, which extend very high behind the bladder, and retains the vagina in a fixed position, on each side, suggesting, up to a certain point, the form of the broad ligaments; but the most attentive dissection does not admit the deter-

mination of any assimilation to an uterus or ovaries. It was, moreover, impossible to detect any orifice at the bottom of the vagina. It terminated in a complete *cul-de-sac.* The relations of the peritoneum with the bladder were normal, and it passed much above the vaginal *cul-de-sac*, and did not nearly touch its fundus.

The presence of two valvo-vaginal glands was readily determined by dissection, having their normal position and volume, as well as their little excretory conduits, opening a little below the ejaculatory seminal ducts. Upon pressing these glands, quite a large quantity of viscous liquid escaped.

Upon the urethra, and in the neighborhood of the neck of the bladder, there was likewise found a little gland, which was certainly a prostate, but slightly developed.

DISCUSSION OF THE PRECEDING FACTS.

While it might appear extraordinary that an error about the sex of an individual could have been prolonged during so long a period, science nevertheless possesses quite a number of examples, of which some exhibit the closest analogy to the one under discussion. It is true, indeed, that the majority of these cases had not been the objects of attentive examination on the part of the physicians, and the physiological demonstration of the two sex was due most frequently to a fortuitous circumstance. One case may be remembered, " cited apropos of a memoir of Geoffroy Saint-Hilaire, of an hermaphrodite monk, considered as a man, and who, in spite of his vows of chastity, disclosed, in parturition, that his sex was not the same as that of his companions of the cloister." (L. Le Fort. *Vices de conformation des organes genitaux.*)

Schweikhard reports likewise the history of an individual registered as a girl, and considered as such up to the moment when he asked in marriage a young girl already *enciente* by him. In this individual the gland is imperforate, and the urethra opened below it; the urine, in escaping, following the horizontal direction of the penis. The author does not mention whether he was enabled to determine the place of emission of the semen.

Louis Caspar, in a treatise analysed by Martini, relates that " upon the complaint of a pregnant woman, who accused a mid-

wife of having done her violence, and of having had sexual intercourse with her, the midwife was examined. It was determined that the clitoris, although more developed than usual, had not sufficient size to effect coition; that the vagina was so narrow that the extremity of the little finger only could be inserted into it, and there existed upon one side a little tumor, which might be supposed to be a testicle."

It would be easy to multiply examples of this sort; and it would be even profitable to science that all the documents which it possesses upon this question should be collected into compendium, which would become a precious guide to physicians who might be called upon to give opinions or to pronounce judgment upon those who should be involved in this anomalous condition. It would be readily apparent from such a work, that if it is sometimes difficult and even impossible at birth to recognize the true sex of individuals, the same difficulty would not exist at an advanced age, and especially near the age of puberty. There would be manifested at this period, in persons who have been the victims of an error, predilections and habits which are those of their true sex, the observation of which would aid considerably in designating their social position, if the condition of the genital organs and of their different functions should not prove sufficient to reach the same end. From such a reunion of observations, this fact would finally be clearly deduced, should its demonstration be still necessary, *that hermaphrodism does not exist in man and in the higher animals.*

Surgery is often all-powerful to rectify certain vices of conformation designated under the name hermaphrodism, and several cases of remarkable success are found reported in the thesis of M. Leon Le Fort; amongst others, that of Louise D——, borrowed from reports of M. Haguier, and for whom this surgeon made an artificial vagina with complete success. The case of Marie Madeleine Le Fort will be remembered, upon which Beclard was commissioned to report in 1815, and who died in 1864, at l'Hotel Dieu. Notwithstanding the very accurate report of Beclard, who decided that she was a woman, she was nevertheless considered, during forty years, by the majority of the physicians and surgeons of the Hospitals, who had opportunities for observing her in the different clinics at which she was presented, as belonging to the

male sex. The autopsy, made by M. Dacorogna, interne of the ward in which Marie Madeleine Lefort died, not only demonstrated that Beclard was right, and that she possessed all the attributes appropriate to the sex to which he had assigned, and though she differed from other women only by a clitoris more voluminous than it should be, and an imperforation of the vagina, which was closed by a rather thick membrane, and the simple incision of this membrane would have sufficed to restore the subject definitely to her sex. Beclard had, moreover, proposed this operation at the time of making his examination.

For a long time many different causes have been adduced to explain this kind of anomaly. The aid of comparative anatomy, especially, has been frequently invoked; but since the brilliant labors of M. Coste, and of other modern embryogenists, it has been particularly of developmental anatomy, or embryogenesis, that the light necessary to resolve similar questions has been sought. It is indeed the study of embryogenesis which teaches us that the different stages of arrest sustained by embryos form the origin of different deformities or monstrosities which are only too frequently submitted to our observation, and which constitute, to a great extent, pathological anatomy, and the whole science of monstrosities or terratology. I shall then lay under contribution the science of embryogenesis, to explain the state of the external genital organs of the subject of this report. According to M. Coste, the external genital organs only commence to make their appearance from the fortieth or forty-first day, and then that the corresponding internal organs have already commenced their development several days before. There may be perceived, then, at this fœtal period, at the base of the caudal protuberance, in the little slit which is more and more hollowed out, and which should, at a later period, communicate with the bladder, the vagina and the rectum, — there may be perceived, I repeat, at the upper extremity of this little slit or groove, two little roundish bodies, which should, in man, constitute the origin to the corpora cavemosa penis, and in woman to the clitoris and the labia minora.

These two little eminences are united by their superior margins, and form, between their inferior margins, which remain free, a little gutter which should remain permanently in woman, but in man is transformed into a complete canal, and constitutes the

urethra. The absence of this union, in man, of the free margins of this slit or gutter, establishes the vice of conformation which is designated by the name hypospadias, which is the condition of the subject now under examination. Below these little eminences just referred to, two other are soon developed, which should form the scrotum of man or the labia majora of women. It is, therefore, the non-union of the two lobes of the scrotum which constitutes what I have designated under the name of labia majora in the subject under examination. The analogy which may be established between the different glands which are found in the vagina of woman and those of the male urethra authorizes as perfectly, to affirm that the valvo-vaginal glands of our subject were no other than those of Cowper, or the bulbo-urethral glands; those in the vagina which terminated in a cul-de-sac, were the urethral glands of man. This vaginal cul-de-sac itself was nothing else than the urethra, which should have remained in its normal state.

Professor Courty, who has extensively investigated the organic analogies existing in different mechanisms, justifies likewise, in a very clear and plausible manner, those which he establishes between the membranous portion of the urethra in man and the vagina in woman. "The vagina, indeed, is developed in the blastema, intermediate to the bladder and the rectum, immediately below the middle perineal aponeurosis, by the formation in the vesico-rectal interspace, of a canal which extends until it meets at one extremity the vulvar opening, and at the other the uterine neck. It is at the same identical point, and in the same manner, that the membranous portion of the urethra of man is formed in front of the urethral crest (ridge formed by the approximation of the two seminal ducts), and behind the groove or gutter of the penis, which is soon converted into a canal by means of an inferior joint extending to the bulb, inclusive.

"From this analogy, confirmed elsewhere by all sorts of proofs which cannot be reproduced here, there is evolved a consequence which permit an apparent paradox at first sight; that is to say, that in man there is properly speaking no urethral canal, whilst there is really one in woman. In man the canal through which the urine escapes from the bladder is nothing else than the analogue of the vulvo-vaginal canal of woman, developed differ-

ently and accommodated to other uses. In man the urinary passages, strictly speaking, terminate at the neck of the bladder. The canal which continues thence belongs, by its origin and termination, to the genital apparatus. It is, in truth and pre-eminently, the ejeculator of semen. *It only lends itself* to the excretion of urine, this liquid traversing it from one end to the other, passing successively through its prostatic portion (uterine neck, its membranous (vagina), and its bulbo-spongiose (vestibule) ; additional proof of the differences of structure or of destination which nature can impress upon organs fundamentally identical." *

The position of the ejaculatory ducts in the subject of this report confirms the theory of M. Courty ; it is apparent, indeed, that in the normal development of this urethra transformed into a vagina, the external orifice of these little canals would correspond to the situation of the verumontanum.

Among the medico-legal questions which might be raised by a case similar to that of Alexina, is that in which an expert might be called upon to pronounce upon the aptitude for marriage and reproduction. It would be assuredly very embarrassing to decide such a question ; but I do not believe that there would have been sufficient authority, after a careful examination of the genital organs, to decide negatively in the one case or the other. Procreation being the natural end of marriage, Alexina was the bearer of organs characteristic of his sex, whose functions were performed. The disposition of the ejaculatory ducts was contrary to that which permitted the passage of the semen directly to the bottom of the vagina ; but it is well understood to-day that fecundation may result even when the seminal fluid impregnates only the entrance to the vagina. Science possesses numerous examples of subjects affected by hypospadias, whose external urethral orifice was more or less approximated to the scrotum, who nevertheless became the fathers of several children ; and in these cases the authenticity of the paternity was demonstrated by the hereditary transmission to their children of the vices of conformation of which they themselves were the subjects.

* A. Courty, *Maladie de l'uterus et de ses annexis.* Paris. 1867, in -8, p. 37.

The seminal fluid taken from the vesicle corresponding to the descended testicle, in the subject of our notice, contained no spermatozoa; for a much stronger reason, the semen taken from the vesicle of the testicle which remained engaged in the ring should likewise have been destitute of it,* and this appears to be the rule for testicles which do not accomplish their complete migration; but this state of affairs could be only temporary in the case of Alexina, for the testicle which had completely descended, and at some future time the existence of spermatozoa in the seminal liquid might have been established. It is well known that, in men who have every appearance of health, there is sometimes a temporary absence of spermatozoa, under some peculiar influence, and that they may reappear subsequently. This might very well occur in the subject of our notice. Contrary to the cases of Follin, the numerous and interesting cases of monorchidia reported by E. Godard, demonstrate in a constant manner the presence of spermatozoa in the seminal fluid of individuals who had but one testicle in the scrotum.

* Follin has likewise reported his observations of individuals who had but one testicle in the scrotum, and in whom no spermatozoa could be found either in one side or the other. (See also the researches of Godard, *Sur la monorchidie et la cryptorchidie*, 1 vol., in -8, 1860; et, *Comptes Rendus et memoires de la Société de Biologie*, 1859, with plates.)

Editor's Book Table.

[NOTE.—All works reviewed in the columns of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. Keen and Cooke, whose catalogue of medical books will be sent to any address upon request.]

Clinical Lectures on the Principles and Practice of Medicine. By JOHN HUGHES BENNETT, M.D., F.R.S.E., Professor of the Institutes of Medicine, and Senior Professor of Clinical Medicine in the University of Edinburgh, etc., etc. Fifth American (from the Fourth London) edition. With 537 Illustrations on wood. New York: William Wood & Co., 61 Walker Street. 1870. Pp. 1,022.

THE rapid exhaustion of successive reprints of this invaluable work is sufficient evidence of the high favor in which it is held by the profession. Without indorsing all the peculiar conclusions at which Prof. Bennett arrives, we can sincerely say that his earnest advocacy and powerful support of physiological and pathological investigations as the real foundation of rational therapeutics, entitle his writings to the careful study of all physicians desirous of elevating practical medicine above mere empiricism; and even though the teachings of a semi-blind "experience" are still to be obstinately adhered to, Prof. Bennett still shows excellently well how to employ the most approved methods in making up the diagnosis. Suffice it to say, we consider this one of the indispensable books for the physician's library and study.

Bellevue and Charity Hospital Reports. 1870. [L. S.] New York: D. Appleton & Co., 90, 92 and 94 Grand Street. 1870. Pp. 416.

WE opened this book expecting to find little more than a mass of tolerably dry historical details and statistics, but were most agreeably disappointed by finding instead a series of fourteen really valuable essays upon various important points: Amputa-

tion of the Cervix Uteri — J. E. Taylor, M.D.; Sundry Physical Signs, three papers, by Austin Flint, M.D.; Excision of the Os Calcis, by F. A. Burrall, Jr., M.D.; Injuries of the Ankle Joint, and Mode of Dressing Fractured Clavicle, by Lewis A. Sayre, M.D.; Seventy-three Cases of Hernia, etc., by Frank H. Hamilton, M.D.; One hundred and two Cases of Bright's Disease, by Austin Flint, M.D.; On Some of the Effects of Excessive Intellectual Exertion, by Wm. A. Hammond, M.D., and several others of like interest. It is, as a whole, a valuable contribution to medical literature.

Why do not our Chicago hospitals take the hint, and go and do likewise?

Personal Beauty; How to Cultivate and Preserve it in accordance with the Laws of Health. By D. G. Brinton, M.D., Editor "Medical and Surgical Reporter," Philadelphia, etc., etc., and George H. Napheys, M.D., Chief of Medical Clinic of the Jefferson Medical College, etc., etc. Springfield, Mass.: W. J. Holland. 1870. Pp. 346.

Although this book was evidently written for popular use, yet practitioners will find in it many valuable hints not readily to be found in the text-books, or even the more elaborate library volumes. It is written in an easy, flowing style, relieved by frequent anecdote and witticism — just the thing to read after a hard day's work, with the feet upon the fender, and the lips closed on — if you can get it — a first-class *Havana*.

Pamphlets.

Contributions to Practical Laryngoscopy. Four Cases of Morbid Growths within the Larynx. Reported by A. Ruppaner, M.D. Plates.

Spinal Diseases. Pathology and Treatment of the Backward and Lateral Curvatures. By Julien S. Sherman, M.D., Chicago.

A Prize Essay on the Medical Activity of the Hemp Plant of North America. By Dr. HORATIO C. WOOD, Jr., Professor of Botany, University of Pennsylvania.

Report of Committee on Consanguineous Marriages. By Dr. ROBERT NEWMAN, of New York. Presented to the New York State Medical Society. 1869.

Dr. Watters' Doctrines of Life. Reply to London *Lancet*, and Closing Remarks. November, 1869.

Prize Essay — Acupressure. The Cash Prize awarded by the New York State Medical Society. 1869. By JOSEPH C. HUTCHINSON, M.D., Brooklyn, N. Y.

The Physical and Medical Topography, including Vital, Manufacturing, and other Statistics of the City of Wheeling, Va. By JAMES E. REEVES, M.D., City Health Officer, etc., etc.

Fifth Annual Report of the Directors and Superintendents of the Illinois Institution for the Education of Feeble-minded Children, located at Jacksonville.

The Half-Yearly Abstract of the Medical Sciences. Being a Digest of British and Continental Medicine, and of the Progress of Medicine and the Medical Sciences. Edited by WM. DOMETT STONE, M.D., F.R.C.S. (Exam.) Vol. I. January, 1870. Philadelphia: Henry C. Lea. 1870. Pp. 296. $2.50 a year. Single copies, $1.00.

Medical Department of the Library of the Long Island Historical Society. An Account of its Formation, with a Catalogue of its Books. Brooklyn. 1870. From C. L. Mitchell, M.D., Brooklyn.

Transactions of the American Ophthalmological Society. Sixth Annual Meeting. 1869. Also, of the *American Otological Society.* Second Annual Meeting. 1869.

[Several of the above monographs, etc., will be further noticed as soon as space will permit.]

The American Journal of Syphilography and Dermatology. Edited by M. H. Henry, M.D., Surgeon to the New York Dispensary, etc. January, 1870. Published quarterly. New York: F. W. Christem, No. 77 University Place; Lindsay & Blakiston, Philadelphia. $3 a year. Single copies, $1.

The initial number of this journal is handsomely gotten up, and its contents are as varied and interesting as the specialties to which it is devoted will permit. We wish the enterprising editor and publishers abundant success.

Editorial.

Rush Medical College — Spring and Summer Course.

In answer to numerous correspondents, we reply that this is not a regular or "graduating" course. It is conducted solely for purposes of instruction, for which this city furnishes most excellent opportunities.

Coroner's Inquests.

It is extremely to be regretted that, for unexplained reasons, the *post-mortem* examinations, made by order of the coroner, however they may conduce to the maintenance of justice and public order, are totally unprofitable toward scientific progress.

A case in point has recently occurred in this city. An unfortunate colored man received a wound in the axillary region, the hæmorrhage from which was so profuse as to require surgical interference. A thoroughly experienced and highly accomplished surgeon proposed to enlarge the opening and tie the artery at the point. The colored man, declining this operation, soon after fell into the hands of some parties, to us unknown, who proposed some treatment (also unknown), which, it seems, was unsuccessful, as, subsequently, an attempt was made to ligate the subclavian. Hence, a speedy coroner's inquest, with a verdict of *death from hæmorrhage.*

What was found by the official examiner was, briefly:

"Inferior trunks of axillary plexus torn up. Could not find the phrenic nerve.

"Ligature included full half of the scalenus anticus muscle, as well as the artery.

"On opening the thorax, the lung was found collapsed, and a broad beam of daylight poured into the cavity from the seat of the operation in the neck."

Under these circumstances, the verdict given strikes us as requiring some explanation. *Quien sabe?*

News Items.

Both the San Francisco medical journals are in full blast, notwithstanding the reported consolidation. Without meddling in the local controversy, we are sure that any move which should deprive the editorial fraternity of the Drs. Gibbons, would be one to be regretted by the profession. Their journal (*The Pacific*) has been and is a most valuable one. —— The *Journal of the Gynæcological Society* chronicles a case of nymphomania, reported to the society with request for suggestions as to treatment. Coitus had been tried ineffectually, "but proved useless, from the fact that those employed could not exert themselves half enough for her satisfaction." The society report leaves the matter still somewhat obscure, viz.: "Dr. Perry remarked that in his own experience cases of nymphomania were very rare. He thought that, in twenty-five years experience, he had seen but two instances of the kind. Dr. Sullivan was inclined to think that the most successful treatment, in many instances, was to allow excessive intercourse." Are we to understand this as the conclusion of the society? —— The same journal, through Dr. Storer, properly characterizes the false and filthy statements of Mrs. Dall's famous letter *anent* female physicians (indorsed in the *Independent* by William Lloyd Garrison). —— The *Nashville Journal* is always spicy, readable and instructive. In the February number the editor comments upon the "New Medical Society" of Washington, organized to include "females and colored men," and in the course of his article gives some inside views of the workings of the American Medical Association in its various attempts to control the colleges. Alluding to the jere-

miads of the *elevators*, he says: "It is consolatory to think, however, that the American system of manufacturing doctors, however defective and needing reformation, did, notwithstanding, turn out from its feeble machinery these very distinguished reformers, and thus, like Swallow Barn's Mill, on Apple-pie Creek, did some good before its water-power was dried up by the dog-days." —— The *Western Medical Journal*, heretofore published at Indianapolis, has been merged in a new paper, *The American Practitioner*, jointly edited by Dr. Yandell, of Louisville, and its former able and accomplished editor, Dr. Parvin. This is a powerful combination of talent, and promises a rich reward in success. —— The *Baltimore Medical Journal* is a new candidate for professional favor, edited by Drs. E. L. Howard and T. E. Latimer. It is a handsome monthly of sixty-four pages, at $4.00 a year. It promises "independence of all other interests, and will not be the organ of any corporation or clique," which insinuates that there are other interests, corporations or cliques, even in the monumental city — from which (in Chicago), good Lord, deliver us! —— The *Medical Bulletin*, of Baltimore, has taken on a new dress, and is edited with spirit and ability. —— The *Leavenworth Medical Journal*, also, is inspired by the new year, and has fitted itself with a new typographical suit. There is an independence and outspoken exposure of shams, pretences and pretenders, in this frontier exchange of ours, that commends it most fully to our affections. The February number is excellent in this regard, and we wish we had space for its indignant exposition of sundry "Home Physicians," *Medical Advisers*, etc. —— The Lexington papers chronicle the death of the widely known and distinguished surgeon and medical teacher, Professor Benj. W. Dudley, at the ripe age of eighty-five years. The *American Practitioner* promises a memoir of his life and writings in its next number. —— At the time of the death of Prof. Dunglison there had been issued of his works 160,000 volumes. —— The venerable Dr. Nathan R. Smith has resigned the chair of surgery he has so long filled in the University of Maryland. —— Prof. J. W. Freer, of Rush Medical College, has returned to Europe, where he will remain until the opening of the next annual session of the College. The course on physiology, which he has recently completed, is probably the first completely demon-

strative one ever given in any college in this country. All his illustrations, experiments, vivisections, etc., have been most remarkably successful, evidencing an originality and facility scarcely surpassed either in this country or Europe. —— Dr. Hunt has recently performed the operation of transfusion successfully, a consumptive young lady in Wisconsin being the patient, and members of the family furnishing the blood. Of course, the kind of case was not desirable for the experiment. Details are promised for a subsequent number. —— We have been shown an improved eye-shade, which seems excellently well adapted to the purpose. The common shade is usually troublesome, both by direct compression, and by its interference with transpiration and evaporation, the breath, etc. The improvement consists essentially in adjusting the shade, with a spring, so that a space of half an inch, or more, is left between the upper border and the forehead. They may be found at the drug-store of Walker & Son, McVicker's Theatre building.

Loot.

On Earth-Closets.

The disinfecting property of dry earth, humus, clay, charcoal, peat, bone black, ashes, and other solid substances, has long been known, and all of these bodies have been applied in one way and another for the prevention of bad odors, for the filtration of water and absorption of gases. The bodies of the dead have, with most nations, been buried beneath the soil, and thus all danger likely to arise during their decay has been removed.

In the thickly populated regions of the East, necessity has impelled the inhabitants to have recourse to the same principle in the disinfecting of all fæcal matter, but in a sparsely settled country great carelessness is apt to creep in and to maintain its supremacy, long after a large increase of population imperatively demands as much care in the removal of all excremental matter as it does in the proper disposition of dead bodies.

The action of dry earth is not only chemical but physical, — and consists mainly in the absorption and removal of the water necessary to the decay of organic substances; the formation of dangerous gases is thus prevented and the animal matter is left to a slow decay (combustion) and no odors can arise.

A small amount of earth is sufficient to disinfect a considerable quantity of putrid or offensive matter, and for this reason its use has been strongly recommended in hospitals in cases of bad sores and wounds.

The recent learned researches of Pettenkofer on the causes of typhus and cholera have led to the conclusion that these dangerous diseases prevail in regions where the water from sewers, out-houses, sinks, etc., approaches near the surface. In fact the cholera was traced along the water courses, and the upper part of the same valley would be left untouched, while the lower portions were subjected to the ravages of the disease. During a dry season the disease was less likely to appear than during a wet. The incontrovertible conclusion forced itself upon the mind of Pettenkofer that there was nothing more dangerous than to have the water near a dwelling contaminated by the diseased fæcal excreta of the population, and he sought for some remedy for this startling evil. If he had heard of the epidemic in the National Hotel at Washington, and of the fever that proved so fatal at the Pittsfield Seminary, he would have had some further confirmation of the accuracy of this theory.

The labors of Pettenkofer in Germany have been ably seconded by those of the Rev. Henry Moule, of Fordington Vicarage, Dorsetshire, England. He experimented with a large number of substances, and finally returned to mother earth, where he found, in the cheapest of all material, the very best agent for the removal of danger.

He proposed to use dry earth as a disinfectant, and invented a simple contrivance for the application of this principle to commodes, thus doing away with all out-houses and other sources of evil about the homestead.

If his suggestions could be universally applied, there is no doubt that the death rate from typhus, intermittent fever and cholera, would be greatly reduced, and the general health of every family largely promoted. We propose to give a description of the apparatus, by the use of which the disinfecting property of dry earth can be practically applied in every household, and for this purpose shall make copious extracts from a pamphlet on the subject of earth-closets, by Mr. George E. Waring, late engineer of the Central Park, and published by the Tribune Association; a pamphlet, by the way, that ought to be circulated as a tract in every portion of the country.

"The principle of the earth-closet is based on the power of clay and the decomposed organic matter found in the soil to absorb and retain all offensive odors and all fertilizing matters; and it consists, especially, of a mechanical contrivance, (attached to the ordinary seat), for measuring out and discharging into the vault or pan below a sufficient quantity of sifted dry earth to entirely cover the solid ordure and to absorb the urine.

"The discharge of earth is effected by an ordinary pull-up similar to

that used in the water-closet, or, (in the self-acting apparatus), by the rising of the seat when the weight of the person is removed. The vault or pan, under the seat, is so arranged that the accumulation may be removed at pleasure. From the moment when the earth is discharged, and the evacuation is covered, all offensive exhalation entirely ceases. Under certain circumstances, there may be, at times, a slight odor as of guano mixed with earth, but this is so trifling, and so local, that a commode arranged on this plan may, without the least annoyance, be kept in use in a room.

"Mr. Moule's patented invention consists of a tight receptacle under the seat, a reservoir for storing dry earth, and an apparatus to measure out the requisite quantity and throw it upon the deposit. A hopper-shaped reservoir, made of galvanized iron, is supported by a frame-work at the back of the seat. Connected with the handle, at the right hand side, there is an iron lever, which operates a movable box at the bottom of the reservoir and causes it to discharge its contents directly under the seat. When the handle is dropped, the box returns to its position, and is immediately filled preparatory to another use."

It is difficult, without the aid of diagrams, to convey an accurate idea of the apparatus employed, but any one sufficiently interested in the subject can easily obtain drawings or descriptions from the Earth-Closet Company of Hartford, Connecticut. After the galvanized iron scuttle is full it can be emptied in a protected place and the contents left to air dry, when it can be again used and again dried, as many as eight or ten times. It will be seen from this that a very small amount of earth is sufficient to serve the wants of a large family. As soon as the pores of the earth have become full it can be employed as s most valuable fertilizer. This brings us to speak of the important saving effected by such an application of the fæcal deposits. The value of composts annually wasted has been put at very high rates, and this view alone would warrant the adoption of the new system, even if the far more important sanitary reason were not enough to convince the most skeptical of its value.

Mr. Waring estimates the direct annual loss to the country by the waste of night soil at $50,000,000. The indirect loss in the falling off of the producing power of the land is left out of view, and the other far more serious loss of life occasioned by diseases brought on by open privy cannot be computed in money, but must especially attract the attention of every student of social science in the country.

There are not wanting statistics of experiments tried in England of employing the dried earth as a fertilizer, after it had been used in the closets, and the results were such that many farmers expressed their willingness to pay as much for the earth as they would for guano. It is probable that in course of time dealers in guano will be prepared to purchase the article at a fair price, and thus those families who have no garden will be able to sell night-soil enough to pay for the vegetables consumed at their table.

"The supply of earth to the house, is as easy as that of coals. To the closet it may be introduced more easily than water is supplied by a forcing pump, and to the commode it can be conveyed just as coal is carried to the chamber. After use, it can be removed, in either case, by the bucket or box placed under the seat, or from the fixed reservoir, with less offence than that of the ordinary slop bucket, indeed, (I speak after four years experience), with as little offence as is found in the removal of coal ashes, so that, while servants and others will shrink from the novelty, and at first imagine difficulties, yet many, to my knowledge, would now vastly prefer the daily removal of the bucket or the soil to either the daily working of a forcing pump, or to being called upon once a year, or once in three years, to assist in emptying a vault or cesspool.

"The earth after it has absorbed the excretions, is so perfectly inoffensive, that I have known some that had been mechanically mixed, taken the same day to London in a box in his carpet bag, by a chemist; and by two engineers' clerks, it was taken wrapped in brown paper in the side pocket." Mr. Moule).

Mr. Waring speaks of the difficulty of properly disposing of kitchen and other house slops and makes the following admirable suggestions:

"Any means by which they may be filtered through or covered with earth will solve the problem. The English plan is to run them through open-jointed draining tiles laid about a foot below the surface of the ground. The lines of tiles being within five or six feet of each other, great fertility may thus be given to the ground of a garden. In our colder states this plan would not be effective in winter. A large hogshead standing on the ground, the bottom being removed, will be serviceable at all seasons of the year, and will produce an immense amount of valuable manure.

"A wooden hopper provided with a lid, and extending to the middle of the hogshead, serves to catch all grease and garbage, and to conduct the liquid to a point where it has earth above and below it. In this way the kitchen slops of a family of five persons for four months were entirely disinfected without changing the earth, and nothing but pure water escaped at the bottom of the hogshead."

Professor Samuel W. Johnson, of Yale College, than whom we have no higher authority in all agricultural matters, writes to the New Haven *Palladium* in the following forcible language, in reference to the Earth-Closets:

"There are two grave questions which enforce attention from every dweller in the city, and should not be neglected by those who have the country for their home. These questions relate to the disposition of the liquid and solid waste of the human body. One of them is, how shall the waste be effectually prevented from being an annoyance and source of disease? and the other, how shall it be made a means of fertility to the soil, and thus an item of national wealth?

"Nothing is better established than the connection between human excrement and certain fearful epidemics.

"It is on all hands admitted that the cholera is most frequently and certainly transmitted to healthy persons, by the intestinal evacuations of those who have been sick with this disease.

"Typhoid fever, a form of disease very prevalent among us, is often traceable, with scarcely less certainty, to privy vaults, cesspools and sewers. It is stated that Prince Albert, of England, probably contracted

the disease that was fatal to him from the foul air that found its way into his study out of a forgotten sewer, through a crack in the wall."

"Most often it is our drinking water that brings into us the contamination. In multitudes of cases the well is but a few yards or feet from a cesspool that receives the kitchen slops on one hand and a privy vault on the other. The writer knows a well which furnished good water for about five years after it was excavated, in what was until than a vacant lot, but after this interval became unpleasant in taste, its flavor plainly suggesting the nature of its impurities.

"In his researches of the cholera, in Bavaria, in 1854, Pettenkofer traced its spread in several cases, in the most indubitable manner, to the use of water which had been in contact with the fæces of cholera patients.

"The safest mode of escaping the evils in question, hitherto adopted in closely built towns, consists in removing all human excreta to a distance, by subterranean sewerage.

"The waste involved in the 'civilized' way of treating the materials under notice is immense. Every harvest brings from the country to the city, from the West to the East, a vast bulk of beef, corn and hay, whose use to the city-people does not, for the most part, consist in any permanent giving of its elements, but which, after having weighed the wheel of life through half a ton, and dropped off as waste, admits of conversion into food again, if but carried back to the fields. The gardeners and farmers in our immediate vicinity are obliged to disburse heavy sums each year for the phosphates and nitrogen which their crops demand, and which their land cannot adequately supply. The guanos and fish manures, which are brought from a distance or manufactured at heavy cost for their use, are in reality paid for, not by them, but by those who purchase their produce in the city markets. The animal who stands at the head of creation requires the richest food, and yields to the food producer the richest return It requires but little art to convert his excrement into manure, and the conversion may be made extremely profitable.

"The means of satisfying, at once, all demands of sanitary science and of agriculture is, however, fortunately everywhere at hand, and of extreme simplicity and cheapness in its application. *Dry and fine earth* is the material.

"This property of earth is no new discovery. Its use was prescribed to the Israelites, (Deuteronomy, xxiii, 12 and 13,) and is turned to good account by the instincts of our domestic carnivora. The Rev. Henry Moule, an English clergyman, was the first to elaborate, by a careful study of the subject, a plan for the systematic employment of earth for this purpose.

"The arrangements required to constitute an earth-closet are not necessarily complex or expensive. It is only needful that a space be had below the privy seat, the bottom of which should be of flagging or cement, and a little above the ground level, or at least protected from the wet of rain and of the ground. The space should communicate with a shed at the rear of the privy, to hold on one side a load or two of dry fine earth (not sand) or sifted coal ashes, and leave an equal room unoccupied on the other. For hospital or sick-room use, either a simple commode or pail, with a hod of earth to apply, or the self-acting commodes of Mr. Moule, may be used.

"Very important it is that hotels, schools, and, we may add, colleges, should be provided with this labor and health-saving arrangement. In large schools it is sufficient to put the application of earth in charge of an attendant. In hotels, the self-acting apparatus is better.

"The fertilizing value of the properly managed compost should be abundant renumeration to parties supplying earth, especially as its carriage is not attended with the slightest odor, and requires not the

cover of darkness to mitigate its terrors, while its use is less disagreeable than that of Peruvian or fish guano, and not worse than the employment of any old compost.

"Reader, lose no time in providing yourself, and inciting your neighbor to provide, some form of earth-closet, in lieu of the vault which has hitherto sufficed. Health and economy both demand it! City authorities would do well to enact that all privies, within a hundred feet of dwellings, or of wells in use, should be converted into earth-closets, and to provide for their systematic and thorough inspection."

The advantages and importance of earth-closets must be apparent to every one who has followed us thus far in our article. They require very little architectural change, and can be put anywhere when a vault is not already dug; they are entirely without odor, and preserve in the best way the full agricultural value of the manure.

If there is a suitable room about the premises for the construction of the reservoir for the earth, it can be made sufficiently large to require to be rarely filled. Where there is a scarcity of earth it is better to dry and use it several times. The contents of the hod must, in this event, be carried daily to a particular spot, and there dried and sifted. In warm climates this can easily be done, but in wet seasons some artificial method for drying must be employed. Twenty-four cubic inches of earth is probably enough for each drop, or a cubic foot for seventy-two times; at the rate of 400 visits per annum for each person, the yearly consumption would be five and a half cubic feet of earth, and, where the earth is used over 8 times, the requirements would be about one cubic foot per annum for each person. This estimate shows that the labor of providing all of the necessary earth must be very small in the country, and it is probable that, after a few years, the rich compost will become a source of profit, and the earth will cost nothing.

Surely a system that will save many lives, keep up the good health of the family, avoid waste of valuable manure, and is cheap and easy of application, ought to be universally substituted for the wasteful, dangerous, unhealthy custom handed down to us by our forefathers. — *Journal of Applied Chemistry.*

Hydrate of Chloral.

From the *Journal of Applied Chemistry* we extract:

"Doctor Bouchut confirms the observations made by Liebreich. The contradictory opinions expressed in reference to the action of chloral are due to the impurity of the material employed. With the hydrate of chloral pure, the results are rapid, evident, energetic. They are hypnotism (sleep) the most tranquil, and sometimes an absolute insensibility. The liquid chloral ought never to be employed. The solid hydrate ought always to be taken for solution in any convenient agent. The acicular crystals, or the

white snowy mass, can generally be assumed to be pure; but, to make sure of the point, it is well to test it with a concentrated solution of potash. If the hydrate of chloral is pure, it will color the potash to a scarcely appreciable faint yellow tinge, and disengage a distinct odor of chloroform, and sometimes the liquid will remain perfectly colorless. If the liquid becomes brown, and disengages the vapors of chloroform, mingled with chloracetic acid, it is a proof of impurity. The liberation of acrid, disagreeable gases, is another proof of impurity. * * * *

"At the meeting of the Chemical Society of Berlin, October 25, 1869, Messrs. Mueller and Paul presented a paper on the preparation of hydrate of chloral. They pass chlorine gas through absolute alcohol until the entire contents of the flask is converted into a solid, white, crystalline mass. For this purpose a strong current of dry chlorine gas must be passed through the alcohol for 60 to 70 hours. If the operation be conducted with care, a uniform product of nearly pure hydrate of chloral will be obtained. The hydrate can be purified by sublimation; for this purpose two funnels are employed, the lower one passes into the mouth of the flask, and the upper one is inverted upon it; the sublimed crystals collect on the walls of the two funnels, and can be easily scraped off, and yields a snow-white, dry, neutral crystalline powder. The novelty of the process consists in converting the whole of the alcohol into the hydrate of chloral, and the subsequent purification by sublimation."

The *Lancet and Observer* gives a translation from the *Bulletin de Therapeutique*, Nov. 26, 1869, of which the following are the conclusions:

"1. The hydrate of chloral is a powerful sedative of the motor and sensitive nervous system.

"2. If the hydrate of chloral is not very pure, so that by the addition of potassa to a solution, the vapors of chloroform are liberated without discoloration of the liquid, it is without action, and may be very dangerous.

"3. Hydrate of chloral should not be administered to the adult in doses exceeding seventy-five to ninety grains, and in children it is necessary to commence with fifteen to thirty grains.

"4. Preparations of hydrate of chloral should not be prepared too long previous to administration, for they may change and lose their efficacy.

"5. Hydrate of chloral may be given by the mouth, or in enemas, which produce the same effect as when administered by the stomach; but the latter method is preferable.

"6. Hydrate of chloral should not be given to persons affected with organic disease of the heart or brain.

"7. It is by the production of chloroform in the blood, under

the influence of its alkaline reaction, that ingested chloral causes sleep and anæsthesia.

"8. It is dangerous in man to administer hydrate of chloral by subcutaneous injections.

"9. Under the influence of hydrate of chloral the arterial tension is augmented, and the frequence of the pulse is somewhat increased; and this tension diminishes on awaking, as is shown by sphygmographic traces.

"10. The urine of chloral sleep is neutral, and boiled with Fehling's liquor does not at first reduce the salts of copper, but the next day, when we find chloral passed by the kidneys, the urine is more dense, and reduces the salts of copper, so that we may be led to think there is a glycosuria, which in fact does not exist.

"11. Hydrate of chloral seldom causes vomiting, and never purging.

"12. The temperature is slightly lowered by medicinal doses of hydrate of chloral, and it should, therefore, be classed as a cooling remedy.

"13. Under the use of hydrate of chloral, cutaneous perspiration is diminished, and the skin is somewhat dryer than is normal.

"14. Hydrate of chloral has this advantage, that we can regulate the dose necessary to produce anæsthesia, while in administering chloroform we cannot control precisely the quantity of vapor; when we employ chloroform we are not exactly sure of what we are doing, and it is this that renders it dangerous.

"15. The action of hydrate of chloral is exactly that of chloroform, but it is more slowly produced, and lasts much longer.

"16. With some persons under the influence of chloral there is a muscular and moral agitation resembling alcoholic intoxication, but this intoxication presents nothing disagreeable or disgusting.

"17. In nearly every case the sleep is characterized by well pronounced anæsthesia, and seldom accompanied by hyperesthesia.

"18. The degree of anæsthesia is proportionate to the dose employed. In the dose of thirty to seventy-five grains, according to the age, it is complete, and permits the application of Vienna paste cauteries without pain, or even the extraction of teeth.

"19. Compared with opium, which causes vomiting, which destroys the appetite, which heats and stimulates, which constipates, which excites perspiration, which produces sleep slowly and heavily, which leaves, on awaking, distress and prolonged somnolence, the hydrate of chloral neither vomits nor constipates, and improves the appetite; it lessens perspiration, and cools the surface; it causes quick and prolonged sleep, and on awaking leaves neither somnolence nor hebetude of mind, and can be taken several days in succession.

"20. In large doses, hydrate of chloral produces algidity, while opium, on the contrary, causes heat and diaphoresis.

"21. We may repeat the dose of forty-five to seventy-five grains two or three times during the day, without inconvenience, and with the result, each time, of several hours' sleep, separated by a short period of wakefulness.

"22. Therapeutically considered, the hydrate of chloral subdues the violent pains of gout, and the intense sufferings of renal colic, or large burns and toothache. It is, in a word, the first of anæsthetics administerable by the stomach.

"23. In cases of accouchement in which we desire to resort to chloroform, hydrate of chloral may be substituted, to appease normal pains, to facilitate obstetrical operations, and to combat eclampsia.

"24. It is the most prompt and efficacious remedy, in intense chorea, when we wish quickly to suspend an agitation which menaces the days of the patient."

Partial Paraplegia.

In a case, now under our care, of partial paraplegia, probably resulting from injury of the spine by a fall a year or two since, but wherein also there had been some fears of a *specific* cause. The patient has previously consulted Ricord and Brown-Sequard in Paris, and Pavy in London. Ricord diagnosed the case as non-specific. Brown-Sequard prescribed as follows:

(1.) ℞ Potassii iodid., - - - - - ʒ ij;
Ammon. iodid., - - - - - - ʒ iij;
Ammon. carb., - - - - - ℈ ij;
Infus. columbæ, - - - - - - ℥ v;
M. S.—Two tablespoonfuls, before meals, with a little water.

(2.) ℞ Extr. belladonnæ, - - - - - gr. iv;
Secalis cornuti pulv. recentis, - - ʒ j;
M. ft. pil. xxx.
S.—One pill after each meal.

(3.) ℞ Ammon. bromid., - - - - - ʒ ij;
Aq. destillatæ fl., - - - - - ℥ v;
M. S.—A teaspoonful and a half twice a day, before meals. Indorsed: (This can be mixed with the first.)

On the second (2) formula is indorsed:

(After two weeks begin with this in any case, and use for two weeks. In case it does not produce a good effect, try the third formula a month at least.)

Dr. Pavy prescribed:

℞ Pot. bromid., - - - - - - ʒ ij;
Pot. iodid., - - - - - - - ʒ j;
Sp. ammon. ar., - - - - - - ℈ j;
Aq. camph. ad., - - - - - - ℥ xij;
Misce fiat mist; cap. cochl. ij magna ter quotidie.

℞ Extr. belladonnæ, - - - - - - gr. ¼;
Extr. gentianæ, - - - - - - gr. iij;
Misce ft. pil. et sep. ad xij, cap. j ter quotidie.

Two weeks later he prescribed:

℞ Pot. iodidi, - - - - - - ʒj:
Tinc. nucis vomicæ, - - - - - - ʒ iss;
Ext. taraxaci, - - - - - - ʒ iij;
Aq. destill. ad., - - - - - - ʒ vj;
Misce fiat mist. cap. cochl. ij magna ter quotidie.

The general coincidence of the independent prescriptions of these two eminent gentlemen, is a proud vindication of transatlantic skill in diagnosis, and "the tendency of great minds to run in the same channel." It is also a tribute to the general power of the medicines employed, in Europe as well as America. We are personally gratified to find that they are not yet entirely superseded by iodoform, carbolic acid, or the hydrate of chloral.

Paste.

The following is a recipe for making common paste which will keep a long time without fermentation:

Dissolve an ounce of alum in a quart of water warmed; when cold add as much flour as will give it the consistence of cream; then strew into it as much powdered rosin as will lie on a shilling, and two or three cloves, ground. It will keep for a year, and when dry may be softened with water.

Morphine vs. Atropine.

Dr. Miner (*Buffalo Medical Journal*) reports a case of morphine poisoning apparently relieved by atropine.

Kerosene.

Seven out of sixty-four fires in New York during the month of August, was caused by kerosene. Out of one hundred samples of oil tested by the Board of Health, only *one* came up to the legal standard. Manufacturers and dealers are reckless in their violation of the law, and will continue to be so until public sentiment demands its rigid enforcement. The crime ought to be punished as severely as arson.—*Boston Journal of Chemistry.*

The daily accidents, often of a most fearful character, which occur from the use of this substance, aside from the mere risk of property, would seem to demand the most stringent legislation upon this subject.

Alcohol on Sponge.

J. B. Hough, M.D., of Ridgeville, Ohio, says: Knowing the fact that absolute or *strong* alcohol will quickly *set* the fibres of common sponge, after having been moulded or compressed into

any given size or shape, I was led to the following quick and easy method of preparing sponge tents, tampons, etc.:

The sponge is first thoroughly moistened with water and pressed as dry as the strength of the hand will permit; then having formed it into the desired shape and size by the hand, or by pressing into a quill or any other tube or mould, it is immersed into the alcohol. If the spirit is sufficiently strong (90 to 100 per cent.), the sponge is *immediately* set into the given shape, which it retains perfectly after the pressure or mould is removed. It is then hard, firm and inflexible, and may be trimmed to a sharp point or any other desired shape.

To restore it to its former size and shape, it is only necessary to moisten it with a few drops of water. The alcohol sets the sponge perfectly, whether the amount of compression be much or little, so that the degree of dilatation attainable by the use of tents thus prepared, will of course depend upon the size after moulding, and the degree of pressure used. As this process of preparation works perfectly and *without delay*, its advantages are obvious.—*Boston Medical and Surgical Journal; Cincinnati Lancet and Observer.*

The Perils of Fashion.

We are indebted to a lady correspondent for the correction of a mistake, or rather an omission, in our recent article on Tight-lacing. In ascribing the ungainly, feeble, and tottering walk of our modern fine ladies and their middle-class imitators to the decrepitude induced by tight-lacing, we omitted to mention another fashionable folly which assists in the production of this evil, and has also other sins of his own to answer for. The custom of wearing high boot-heels, and those too so much smaller than the actual heel of the wearer as to afford no solid support, but only a balancing-point, is a source of much mischief. In the first place, it throws the centre of gravity of the body so far forward that a free and gracefully erect carriage is impossible. Secondly, there being no firm support to the heel, ladies are very apt to twist the ankle suddenly by overbalancing themselves; and this is not only bad in itself, but the fear of its occurrence makes them assume a timid, mincing gait. And, thirdly, the effect of driving the foot constantly forward into the toe of the boot, is to produce a very ugly and painful distortion of the great toe joint.

There is little need for wonder at the almost fierce contempt with which young men whose characters are at all above the lowest grades of conventional inanity regard the average "girl of the period." It cannot be denied that there is a significant correspondence between the æsthetic hideousness and the degrading effects on physical health which are produced by tight stays and crippling boots, and a certain mental and moral tone in female

society of the present day, which is no less surprising than it is repulsive. The whole dress and carriage of our fashionable women, for several years past, has been modelling itself, with less and less concealment, upon the ideal furnished by Parisian *lorettes* of the consumptive Traviata type. It is not our business to set up as moral censors. But we may be excused if, for once in a way, we find it impossible to ignore the logical though repulsive consistency of the *grandes dames* and the citizenesses who are willing to spoil their lungs and their digestions, and endanger their chances of happy maternity, for the sake of a wasp waist; to talk slang closely verging on indecency, for the sake of the tenth part of a chance of catching a husband; and to simper and leer at the indecencies of a *Grande Duchesse de Gerolstein*, in order to escape the dreaded imputation of a deficiency in *chic*.—*Lancet*, Oct. 2, 1869.

Dissection Wounds.

The name of Professor Boehm of Berlin, must be added to the long list of victims who have perished in the accomplishment of the perilous duties of the profession. While dissecting a body in the presence of the students, he scratched his hand with the scalpel, but so slightly that he neglected to cauterize the wound or to take any other precaution. Two days afterwards, the hand had swollen enormously, and since then all the means which had been tried to arrest the progress of the disease have been to no purpose.—*Medical News.*

Remarkable Operation — Extirpation of a Kidney.

At a meeting of the New York Medical Journal Association, Dr. H. Knapp made a communication concerning a new triumph of surgery, namely, the *successful extirpation of a kidney*, by Prof. G. Simon, Heidelberg. The patient on whom the operation had been performed, early in August last, was a woman both of whose ovaries and part of the uterus had been excised previously by another surgeon, for ovarian dropsy. The wound had healed, but a *urinary fistula* had established in the cicatrix of the abdominal wall. By ingenious experiments, Prof. Simon found out that it was not a piece of the bladder, but one of the ureters, and which of the two, that had been implicated in the cicatrix. The extirpation of the corresponding kidney was not easy, but effected without a serious accident. The patient experienced some fever during the first two weeks after the operation, but recovered entirely within six weeks. Dr. Knapp said that he felt happy in being authorized to give the Society this preliminary notice, according to a letter he had just received from

Prof. Simon himself. He thought this operation would interest the Society, not only as the newest, but also as one of the most remarkable surgical achievements.—*Phil. Medical and Surgical Reporter.*

Water in Alcohol.

A SIMPLE test of the percentage of water in alcoholic solution is furnished by the affinity of alcohol for chloroform. In the experiment a little chloroform is poured into a graduated glass tube, and a given volume of the spirits to be tested is added, and both well shaken up together. On settling, all the water will be found to have separated from the alcohol (which has combined with the chloroform), and its amount can be read off on the graduated tube.—*American Artisan.*

Bromide of Potassium for the Troubles of Teething.

THE bromide of potassium is highly spoken of by Dr. Hoehling (*St. Louis Med. Jour.*), and by Dr. Caro (*Medical Record*), as a remedy for faulty nutrition, irritability of the stomach, vomiting, restlessness, diarrhœa, etc., resulting from teething. From half a grain to a grain, given every hour or two, will, in a short time, often procure relief and sleep when other means have failed. The following is selected from Dr. Caro's list of twenty cases: S. Fay, nine months old, has six teeth, nursed by a healthy mother. After fifteen days of diarrhœa, with from fifteen to twenty passages every twenty-four hours, was cured by a mixture of one drachm of bromide of potassium in an ounce of mucilage, twenty drops every hour. Dr. Caro adds: "I have had fifteen similar cases in every form, having been sick from fifteen to twenty days before coming to me, all treated and cured by the bromide of potassium."

[WHILE the candidates for graduation, at the recent Commencement of Rush Medical College, were responding, in writing, to Prof. Gunn's interrogatories, a first-course student perpetrated and sent down the following impromptu:]

Oh! Dr. Gunn, it is such fun
To stand examination.
While sitting high, who else but I
Can give the explanation?

I.

Of abscess,* signs of which are pains
Above the sacral bone,
A weakened back, and general lack
Of health, and strength, and tone.
And when the pus shall make a fuss,
And down the psoas burrow,
Upon the thigh will appear high
Suspicions, like a furrow.
And if of wit you've not a bit —
For hernia should mistake it,
'Tis my belief you'll come to grief —
A cure you will not make it.
I think there is, — so Druitt says, —
A kind that does not burrow,
But keeps behind and is the kind
That makes the patient sorrow.
It gives him chills, and often fills
His nights with pain and woe,
With hectic blush his cheek will flush,
He thinks he soon must go.

II.

How shall we treat it? Why, thus we'll greet it:
On beef we'll feed him well.
And if at length he keeps his strength,
Prognosis good we'll tell.
And when it points, why use the lance
And let the matter out.
'Tis of no use to keep him close,
But make him ride about.

III.

Of number three, just this I'll say:
You'll find the scrotum full;
'Twill feel like worms had there their home,
And downward it will pull.
The venous blood, an ebbing flood,
Comes down the spermatic vein.
It will not flow where it should go,
But settles back again.
Just tie the vein, and then, I ween,
No more will you be wanted;
The weight above you will remove,
Your service will be vaunted.

* Psoas.

IV.

Of cancer? Well, I cannot tell
Just why it should appear;
But this I know, 'twill faster grow
The more we interfere;
Unless to save, with courage brave,
We use the surgeon's knife:
I've heard you say, "perchance it may
Prolong the patient's life."
I think you said "'twas called colloid,"
The alveolar kind.
Where it loves best to make its nest
I cannot call to mind.
Its appearance gross, I must confess,
Like jelly somewhat looks —
Of watery hue, transparent, too,
And full of little nooks.
Peculiar cells its substance fills,
The microscope will show.
But what they are, I am not sure —
You surely ought to know.

V.

A broken knee? Oh, yes, I see
The fracture is transverse;
'Twill lengthwise go, and radiate, too,
Which makes the matter worse.
The truth to tell, the knee will swell —
And may I be so bold? —
The lazy wretch his leg can't stretch,
The "rectus" has lost his hold.
Now, a roller find and tightly bind
The thigh from ilium down,
And then, at last, just stick it fast,
If "adhesive" can be found.
The leg keep straight, and keep it late,
Upon a splint extend;
Six weeks, you know, before 'twill do
To let it freely bend.

Why, bless me! so I've got through,
And it is getting late, —
This more I'll tell — I wish quite well
I were a graduate.

A First-Course Student.

THE

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Original Communications.

ARTICLE I. — *Upon Certain Mechanical Means of Restoring a Retroverted Uterus.* By H. WEBSTER JONES, A.M., M.D., Accoucheur to Cook County Hospital, Chicago.

IT has been insisted by the writer, in a previous paper, that every artificial support for the uterus should harmonize with nature's laws; conduce to, rather than hinder, the propagation of species, and be entirely compatible with the bodily and mental comfort of the wearer.

Success depends upon an approximation to these ends, because,

First, Any contrivance which is not based upon exact anatomical knowledge, or which is applied without special investigation of the pathology of the case, is far more likely to do harm than good. And it is due to the lamentable failure of many in these essentials, that the very name of pessary has for years been odious, and that the disorders for the relief of which the instrument was used, have been truly the *opprobria medici*.

Second, Elevators of the womb which *fully* occupy the vagina, and thus hinder the marital relation, are rarely tolerated for a

sufficient period to insure even a degree of improvement. Frequent removal and replacement, for any purpose, is oftentimes undesirable, and patients are rarely taught to perform this office for themselves.

Third, A pessary which constantly suggests itself to the wearer, either by its unphilosophical construction, or by its requiring external strapping or bandages for its own support, has the disadvantage of substituting, in its best estate, an artificial and moral anomaly for an inbred and physical evil. The first element of success in dealing with the female organism, is the diversion of the mind from morbid channels, and that physician defeats his own ends who offers his patient a constant reminder of her weakness.

In brief, then, a pessary should possess a *general adaptation* to the anatomy of the parts; a *fitness* to the peculiarities of the case; *no need of frequent removal; non-interference* with coition, and a *self-supporting* and *retentive power*, devoid of bandage or external appliance.

It is a curious study, to view in the light of these principles, the vast array of instruments which have been proposed as uterine supports. If necessity be indeed the mother of art, it is abundantly evident that, for ages, physicians have appreciated both the cause of woman's suffering, and the difficulty of relieving it.

Without attempting a history of these inventions, it is proper to consider them as comprised within four classes:

1st. Those intended for adjustment *anterior* to the *cervix uteri.*

2nd. Those intended to apply power *more directly* to the cervix, by means of a cup or ring embracing it, and dependent upon *exterior* means for their own support.

3rd. The intra-uterine stem pessaries, which act upon the entire uterine cavity, and are supported from without.

4th. The instruments which *elevate* or *retract* the cervix by pressure applied behind it, in the vaginal *cul-de-sac.*

After what has been said, it will be apparent that many and grave objections to the use of most of the pessaries now in vogue, may be properly urged.

All instruments of the *first class* mentioned, are open to the charge of non-conformity to the anatomy of the parts. In order

to a cervico-pubic distance of two inches and a half (*vide* JOURNAL, January, 1870,) the globular pessary of Dr. Physick needs a diameter of that extent. This renders its introduction and removal difficult. The colpeurynter of Dr. Garriel is an improvement, but both distend the vagina unnaturally, and rest heavily upon the rectum and urethra, while the latter has a disagreeable appendage in its tube and stop-cock, with regard to the security of which the most courageous patient has many a doubt. Moreover, these instruments are partially obstructive as regards the exit of vaginal and uterine secretions, and totally so as to sexual congress.

Their removal and reposition *by the patient*, for these purposes, is ofttimes equivalent to a nullifying of the objective result, since, in retroversion, they are quite likely to be introduced *under* and *behind* the *cervix uteri*, thus perpetuating the displacement.

Furthermore, they exercise pressure upon a portion of the uterus evidently designed to be especially freed from such contact, and may not be used where inflammation already exists, unless for the relief of a *procidentia*, where they become useful, temporarily, and are the least of two evils.

Pessaries of the *second class* are open to the last objection in a more marked degree. They either embrace the cervix in an inelastic ring, or environ the annule of the *os uteri* with a cup which resists its normal variations.

They must be removed during copulation; are dependent upon external harness, and as usually constructed, would lift the uterus bodily above the plane of the superior strait.

The "Hoffmann" instrument is of this class, and is in few respects superior to the stuffed rings and discs of the Germans, which have, it is hoped, now become obsolete. There is no "law of suction" whereby, antagonizing the force of gravity, it may elevate itself and the superincumbent organs.

It is properly doubted by authorities of the present day, if indeed intra-uterine stem pessaries, of the *third class*, should ever be used for the purpose of restoring a retroverted or retroflexed uterus.

They attack the organ in its most sensitive tissue, and even if tolerated for a time, are prone to excite early metritic inflammation.

Within the fourth class are included several instruments of fairer fame.

The "lever" of Dr. Cutler, novel in principle, adopts as its fulcrum so sensitive and mobile a structure as the posterior vulval commissure. The writer has found it useful in combating a minor rectocele, but for uterine retroversion, its almost universal result — *perineal irritation* — renders it unavailable.

The flexible ring of Dr. Meigs, based upon a correct idea of pelvic distances, is easily inserted and withdrawn; is in no sense obstructive; demands no external appliance, and is in a remarkable degree unnoticed by the wearer.

But it distends the vagina *laterally*, which is a fault in many cases; tends to obliterate the *reservoir* of the vagina by its tent-like expansion, and does not elevate the *os uteri* in the normal uterine axis. Moreover, its elasticity demands the adoption of a *material* less durable than is consistent with safety in long usage.

The self-extending pessary of Dr. Scattergood is not so flat, and has no objectionable lateral expansion, but its duplex character, and consequent liability to retain the vaginal secretions, make it almost uniformly offensive to the wearer.

In common with these three instruments, the lever pessary of Prof. Hodge possesses the incalculable advantage of avoiding all pressure upon or contact with the *cervix uteri*.

Like the last two, it takes the least sensitive tissues over the inner face of the pubic rami as a *point d'appui*. Unlike them, by its pelvic curve it preserves the receptive and retentive powers of the distal vaginal extremity, and thus avoids sterility. Elevating the *os uteri* above the pelvic floor, it oftentimes *greatly conduces* to the cure of cervical erosions, and by its relief of the torsion of broad ligaments, it sets in motion all the machinery of nature for the cure of hypertrophy of the womb.

It may be worn comfortably during coition, and frequently, by removing an irritable uterus from the possibility of contact, renders this function, for the first time, endurable.

Made of incorrodible material, it has been worn for years, by cleanly persons, without loss of its original smoothness and polish.

Under proper manipulation it may be moulded and adapted strictly to the peculiar demands of the wearer. It bestrides the

rectum, instead of resting upon it, and conduces to ease of defecation, and to normal vesical retentiveness.

Being in itself, when in place, a means of determining the patient's need of support, it is certainly the most philosophical, physiological and comfortable pessary yet known.

But however perfect in theory, this support often fails to effect relief, because of its unskillful application, and because of the wearer's ignorance or disregard of certain rules essential.

On the part of the physician, it should be seen to that the instrument selected be neither too wide nor too narrow.

If the former, the pain of introduction will intimidate the operator, and discourage the patient. It is to be remembered, however, that a pessary which passes the *ostium vaginæ* with difficulty, may be worn with entire ease when fairly *in situ*, and particularly is this true of virgins and non-parturient women.

As a general rule, a width over all of more than an inch and three quarters should not be chosen for such cases.

The variable laxity of the tissues concerned makes this far from absolute, but it is certain that *when introduced*, the instrument should never create great lateral tension. Neither should it be too narrow, for thus it loses the intimate lateral contact of the vaginal walls, upon which it is often entirely dependent for the maintenance of an antero-posterior direction. Its retention also depends upon a proper correlation of the instrumental and vaginal width.

Moreover, the pessary should not be so narrow as, in the slightest extent, to compress the *cervix uteri*. In cervical inflammations and hypertrophies this is especially to be guarded against.

When possible, it should always be wide enough to rest at either side of the rectum, when that organ will conduce to maintain rather than overthrow its rectitude.

The length of the instrument, and its height, are important considerations. The former should never exceed three inches and a half, nor the latter be more than two inches (*vide* JOURNAL, January, 1870.)

Contractions of the vagina will often require that these dimensions should only be approximated by a *gradation* of instruments, inserted at proper intervals of time. And in all cases of difficult reposition and adjustment, the condition and form of the

urethra must be respected. If it be tender or prominent, the anterior and transverse bar of the lever must be deflected downward and backward.*

Having thus chosen and prepared an instrument, the manner of its insertion is not unimportant. A decubitus upon back or side may be taken by the patient. The position for the use of Dr. Sim's speculum is desirable when difficulty is apprehended. No lubricating material is so good as castor oil, and the operator should remember that the only *distensible* tissues concerned, in the outset, are those of the perineum. Thus he will spare the urethra, and will intrude the pessary obliquely and at one side of that protuberance, avoiding the delicate structure of the *fourchette* as well.

When the uterus is small and movable, it may be possible to pass the distal arch of the instrument behind the cervix, before allowing it to assume a flat position upon the vaginal floor. But, commonly, this latter change should be made so soon as the entire pessary is within the vagina. If the instrument has been well selected, its posterior extremity, by hooking the finger (from underneath) over either longitudinal bar, will be readily sunk until the cervix slips suddenly, and to the great relief of the patient, over the arch, and is suspended, looking downward and backward, in the normal uterine axis.

It is in this last manœuvre, ofttimes, that one finds the patient most resisting, and it is here that the actual reposition of the uterus takes place. If the instrument has been *first* introduced entirely, and it is of a proper length, before the extremity of the cervix may pass over the arch, the uterine axis *must* assume a parallelism with the axis of the superior strait, or even pass into the direction of anteversion. This excess of transit it is

* The writer has abandoned the general use of the "horse-shoe" form of Prof. Hodge's pessary, finding that the "closed bar" lever is more comfortable, and does not hinder coitus, and that the urethral curve above mentioned actually conduces to the propriety of its position.

It does not seem to be understood that any necessary deviation from the commercial form of the pessary may be obtained in a few minutes, by warming *one portion at a time* over the chimney of a kerosene lamp, and fixing it with a *gloved* hand, till the rubber cools and "sets." Too rapid heating results in a loss of polish, which is detrimental.

proper that the physician repeat, by tipping the front cross-bar downward toward the rectum, in order that he may be assured (by simultaneous abdominal palpation) that the *fundus uteri* has left Douglas' *cul-de-sac* to be occupied by the small intestines. With this assurance, and with the knowledge that the whole instrument is adapted to the conformation of the patient, and is, to a certain extent, free to accommodate itself to her position, motion, etc., he may consider that his instant duty is done.

The after-treatment consists in such frequency of observation as the exigency of the case requires; the sensations of the wearer, the condition of the vagina, and the position of the instrument, being the *criteria* whereby the attendant determines the necessity of alterations in the form or dimensions of the pessary, or of a temporary withdrawal of it from over-sensitive tissues.

Daily injections of water (or mucilaginous decoctions, in certain cases,) are essential to cleanliness and health, and it is proper to remark that the various astringents in common use, are liable to fasten upon the instrument the coagulated secretions of the vagina, and demand its occasional withdrawal, lest it become thus roughened and irritating.*

The wide variety of circumstance attending this class of practice, renders any specific rule a mere assumption; but it may be stated, generally, that the need of watchfulness on the part of the physician is proportionate, first, to the *duration* of the displacement.

If of long standing, there may be a degree of vaginal contraction difficult to overcome, or even so great relaxation as will render the mechanical means adopted unstable in its position and office.

Second, the *degree* of retroversion is to be regarded. When this is "complete," the general system may have been wrought up to a very irritable and intolerant state, so that any change is, at best, for a time, of uncertain utility.

* The writer has removed the vulcanized rubber instruments of Prof. Hodge, two and even four years after introduction, to find them perfect in smoothness and polish, and he has found them, within two months, coated with foreign deposits which caused serious annoyance to the parts involved.

Third, the *weight* and *condition* of the uterus may complicate the result; hypertrophies and inflammations will demand the greatest caution, until it be proven that the tendency of these morbid states is toward recovery.

Fourth, *hyperæsthesia* of the vagina and pelvic tissues, generally, will often demand modifications of the form and dimensions of the pessary used, or even require, temporarily, its complete withdrawal.

Again, the failure of the patient to observe and faithfully obey the injunctions of her medical adviser, will often frustrate the plans of the wisest, and bring odium upon the means employed. Instructed that constipation and vesical fullness is her direct foe, she will often suffer the suggestions of nature to pass unheeded, until they become imperative demands, meantime complaining that the support produces pain and impedes motion.

Taught to avoid any abdominal compression, as liable to put upon the pessary more weight than it can sustain, she will often, by tight dressing, or by such labor and exercise as require the forcible contraction of abdominal muscles, annihilate the benefit received. Informed that cleanliness is essential to comfort and health, her daily vaginal ablutions are forgotten, till vaginitis and its attendant evils force her to regard counsel. Besought to note the earliest signs of failure on the part of the instrument to elevate and support the womb, she passes weeks, nay, even months, without such investigation as might provide against the ultimate and grave results of her imprudence.

"What wonder that "*cures* are rare," and "accidents common!"

In brief, under *most favorable circumstances*, and *with watchful care*, it is believed that the pessary of Prof. Hodge will accomplish all that the inventor claims for it, and that it is a safer and better instrument for the relief of lapse, prolapse and retroversion of the uterus, than any mechanical contrivance yet proposed.

Finally, it is due the subject, and the writer's ends, to say that there undoubtedly exists among the profession an inclination to demur at the claims of uterine displacements as an important class of affections.

This fact was met, a few months since, by the publication of a

few cases illustrating their bearing upon the female economy, as disturbers of its healthful relations.

It was also true that much of the doubt, silent and expressed, upon the question of the utility of pessaries, was due to false ideas of the anatomy of the pelvic contents. This error was treated very briefly in a more recent paper.

It remained to inform those who had never investigated the subject, of the existence of an instrument which conformed to the anatomical and physiological demands of woman, and to suggest some of the salient points whereon its usefulness might depend.

It is hoped that the medical public may discern, in these attempts, nothing more than an earnest desire to make available to the inquirer the fruits of much experiment, and many and varied disappointments in a wide and interesting field of research.

ARTICLE II. — *Medical Domain of the Turkish Bath.* (Continued.) By M. P. HANSON, M.D.

IN our former article we labored to show from physiological reasoning, and well ascertained facts, that the Turkish bath is the most natural, safe and powerful agent for the accomplishment of many indications of cure in the treatment of disease, viz.:

To equalize the circulation, and thus remove congestion.

Distribute nutrition.

Restore, and keep active all the secretions, and thus eliminate poison from the system.

If my conclusions are admitted, all physicians will be prepared to concede to the thermæ a wide range of usefulness in the prevention and cure of disease, and the experience of ages among the Eastern nations, and the more enlightened experience of the best medical authority of Ireland, England, France and Germany, for the last twelve years, amply justifies such a concession.

And, as a matter of fact, we find,

I. That the bath is of the greatest utility in all passive diseased states, wherever action is below par, as in the commencement of acute diseases; in the premonitory stages of fevers; and inflammations. In the congestive stage of eruptive diseases — measles,

scarlet fever, small-pox, etc., whenever collapse takes place, and the symptoms show a retrocession of the fluids from the surface to the interior; whenever congestion of vital organs exists or is apprehended.

II. The Turkish bath will diminish, or prevent the liability to take infectious diseases. Heat is the greatest disinfectant known. Heat that will harden albumen (or cook an egg), will kill any animal poison, whether it be the natural secretions of animals, or the matter or effluvia of infectious diseases, as small-pox, syphilis, etc. Also, the liability to take infectious diseases often depends on a habitually sluggish condition of the kidneys, with scanty secretions. Now, the powerful revulsion to the surface, and drain of fluids and effete matter secured by the bath, eliminates the poison from the system.

III. In *Bright's disease* the condition of the patient begins to improve on his first introduction to the bath. Even in cases where the secretion of urine is almost suspended; where the system is saturated with urea, and dropsical effusion is general, and the brain begins to show signs of the irritation of the poison in the blood, the bath will correct the most troublesome symptoms more surely and quicker than any other means known. Even in cases where the kidneys are so far disorganized as to render a cure hopeless, the bath will cause the skin to take on a vicanous function, and it will, as Dr. Shrudichum declares, "throw out large quantities of uric acid, and rid the system of the effete and poisonous matter that should have been discharged by the kidneys," and thus prolong and make comfortable a life that, under any other treatment, would be very short and wretched in the extreme.

IV. *In diabetes* the functions of the skin are suspended, and extra duty thrown on the kidneys. The bath will restore the functions of the skin as nothing else will, the quantity of urine and its specific gravity begins to diminish immediately, the inordinate thirst disappears, sleep returns, the spirits revive, the pain in the loins and limbs subside, and the whole condition and appearance of the patient changes in many cases as by magic.

V. In nervous diseases of the heart, and in those connected with organic disease, angina, pectoris, hydro-pericardium, the hot room does actually quiet the circulation and improve the condition of the patient almost immediately on his entrance.

VI. In *bronchitis*, or irritative congestion of the windpipe and larynx, the bath cannot fail to be permanently useful, for this disease is usually only symptomatic of a morbid condition of the skin and digestive organs. In acute affections of the throat, even in croup and diphtheria, the bath will almost invariably save life.

VII. *In consumption* the bath will, on the clearest abstract grounds, as well as on the showing of facts, produce the greatest ratio of arrests of that terrible disease.

The tubercle producing products of imperfect digestion are drained out of the system; internal congestions are removed; the air-cells dilate; the relaxed skin braced; the appetite and power of appropriation increased; night sweats checked, and sleep secured.

VIII. *In dropsies*, whether of the shut cavities or cellular tissue, the bath is the most direct and natural cure, for it appeals directly to the absorbents to furnish water to protect the surface, and the effused fluid is actually taken up and restored to the circulation and evaporated from the surface. I have seen many pounds of fluid taken out of the system in a single bath, and the actual measurement of the patient reduced, around the abdomen, three inches.

IX. In *chronic liver disease;* in enlargement, or simple congestion; in the passage of gall stones; and all liver obstructions, the bath will afford relief quicker, and at less expense to the system, than any other treatment.

X. In *gout* and *rheumatism* the bath is the remedy *par excellence.*

XI. In *diarrhœa* and *dysentery* the bath is the cure, as determining the fluids from the internal linings to the skin, thus relieving internal congestion, on which the disease depends.

XII. The bath will take down, summarily and safely, excessive obesity, while it will as surely promote the nutrition of the ill nourished, increasing the appetite in proportion as it increases the power of appropriations.

XIII. The bath is the truest and best anti-spasmodic in bilious colic; in spasms of the bronchial tubes; asthma, even in lock-jaw, and tetanus. Between the combined effect of the hot room and the cold douche, spasms and cramps, of all sorts, will find a power to control them, by equalizing nervous action, and causing division of nervous excitability.

XIV. The Turkish bath will remove that very offensive personal odor, whether of the breath or the person, that attaches to some apparently cleanly and healthy people, and always, more or less, to the insane, giving that peculiar stench to asylums where they are congregated. This condition depends upon the accumulation of effete matter in the follicles and sebaceous glands of the skin. The bath, by flushing these drains, will remove the cause of insanity, in many cases, and make some people that are not insane fit for human society that never were before.

XV. *In uterine diseases*, whether suppressions or dysmenorrhœa, or that general failing of all the functions, known under chlorosis, the bath will invariably relieve, by removing the conditions on which the symptoms depend, whether of congestion of the organ, which is most frequently the case, or lack of development of the function. In either case, the bath is the power by which the function can be established and controlled.

But I have gone far enough into detail. No experienced physician, if he admits any conclusions, will fail to see that the medical domain of the thermæ is vast and important.

Dr. Carl Luther, of Berlin, says: "Formerly, when I received a patient, my first inquiry was to find the name of the disease. Since I have adopted the Turkish bath, I feel so sure of a cure I do not care to know the name of the disease."

Dr. Gosse, of Geneva, says: "The Turkish bath is the real panacea for the larger portion of the diseases that assail mankind."

Dr. I. L. W. Shudichum, of London, says: "In the Turkish bath I feel that I have put into my hands the most powerful and certain, and, at the same time, the most safe and agreeable therapeutic agent in existence."

Dr. Erasmus Wilson, of London, in an address to the British Medical Association, said: "We have thus presented to us the effects of the bath, applied to the skin:

"1st. An improvement of organic structure.

"2nd. An improvement of secretive function.

"3rd. An improvement in circulation and respiratory power.

"4th. An improvement in inervation and sensation."

"The bath that cleanses the inward as well as the outward man; that is applicable to every age; that is adapted to make health healthier, and alleviate disease, whatever its stage or

severity, deserves to be adopted as a national institution, and merits the advocacy of all medical men; of those whose especial duty it is to teach how health may be preserved, and how disease may be averted."

Dr. John Balbirnie, of London, says: "If I were asked to give a brief and distinctive definition of the Turkish bath, I would say, it is that which claims the exclusive, pre-eminent power of physiologically opening the safety valves of the living mechanism; or developing a high activity of the depurating functions of the animal body, and so fulfilling the first grand indication for the cure of all diseases."

ARTICLE III. — *Musk.* By J. E. O'BRIEN, M.D., Phillipsburg, N. J.

AMONG the specifics used to be considered musk for hiccough. While legitimate causes have happily removed many other drugs from the list, musk is in a fair way to succumb to the evil effects of adulteration.

I think it was Prof. Wood who, after trying several druggists' specimens, succeeded with a pod taken from his own cabinet. As far as I can learn from others, failure now attends every prescription of musk. In a recent search for the pure drug, one of two New York professors of *Materia Medica* upon whom I called informed me that he had ceased to lecture upon musk, so little confidence was felt in it there.

In this connection, I offer the following case, premising that the patient was a personal friend:

January 12. J. K. Erysipelas of face. Upon second day, congestion of the brain. The usual means: tinct. iodine, iron, bleeding, shaving of the head, ice to the scalp, enema, et al., were used in their appropriate places. Upon the ninth day delirium had ceased, pulse soft, skin moist, face still swollen.

January 21. Patient began to hiccough in morning; kept it up all day. I prescribed musk; Dr. Cavanaugh, of Easton, in consultation, prescribed blister. Morphia at night.

January 22. Notwithstanding morphia, hiccoughed all night, and still at it; Dr. C. thinks he will die; Dr. Field, of

Easton, called; recommends Hoffman's anodyne; also chloroform to epigastrium. Suggestions carried out.

Having exhausted the resources of this place in musk, Dr. F. obtains some in Easton. Given: grs. x every two hours.

23rd. I obtained a fresher article in Easton, at $32 per ℥; it is given from noon until ℥j has been taken.

24th. Hiccoughing steadily except an intermission of three hours, from 7 to 10 A. M., which we refer to the last prescription of musk. We now give quinia.

℞ Quinia Sulph., - - - - - - - - - ℥j;
Morphia Sulph., - - - - - - - - grs. ij;
M. Ft. Pulv. No. vj. S. One every hour.

This produced deafness, but the hiccough continued unabated, the spasms occurring every second, with exhausting force and painful regularity.

25th. No change; hiccoughing steadily; patient nearly worn out.

26th. Believing that pure musk, could it be obtained, would stop the hiccough and prevent death from exhaustion, I determined to seek the pure drug, and went to New York for the purpose of obtaining the assistance of Professors of Materia Medica in the search. The professors of two different colleges very kindly recommended me to a reliable Broadway druggist, who offered me powdered musk, but I was skeptical of powders, and refused. Finally, at the old drug house of W. H. Schieffelin & Co., I obtained two fine specimens of the glands from Moschus Moschiferres, containing about ℥ ij of powder each; price $18.40. Getting back at 7 P. M., find the patient rapidly sinking under the unremitting spasms of hiccough. I leave six powders of grs. xij each, directing one every two hours.

27th. At 5 A. M., when last powder was given, hiccough ceased. No more until 1 P. M., hiccough for twenty minutes, then ceased.

28th. At 5 A. M. "a few draws." This was the last of the hiccough. Gave quinia sulph, ℥ ij during the day.

Patient very sore about precordia; relieved by blister. All through the case patient took beef tea, made rich with cream, and in the last week, brandy. Some sequela occurred in the shape of

cough, also an abscess over middle of right sterno mastoid, which discharged freely. The patient gradually gained strength, and now, February 20th, is able to walk about.

Among other remedies, I prescribed:

℞ Potass. Bromidi, - - - - - - - ℥ ss;
Tinct. Card. Comp., - - - - - - ℥ vj.
M. S. Tablespoonful three times daily.

But he failed to take it.

We are satisfied that pure musk saved this man.

ARTICLE IV.—*Amputation of the Right Arm at the Shoulder Joint, with excision of a portion of the Shoulder Blade, for Necrosis.* By W. H. HESS, M.D., Nebraska City, Nebraska.

H. A. GRAHAM, aged twenty-eight years, a soldier in the late war, received a gunshot wound in the elbow joint, for which his arm was amputated immediately above the wound. The stump appeared to do well for a time, but two months after the stump was attacked with pain, and continued at intervals until pus formed and an opening made for its exit. The pus was found to contain small particles of bone, and the pain was lessened for a time, but again returned, and continued at intervals until the patient was unable to endure it longer, when a second amputation was performed, in September, 1866, being two years and three months from the time of the first operation. The result was again ineffectual, as the pain and disease returned after a lapse of three months, which he endured until July, 1869, (the ligatures having been left in over two months may possibly have been the exciting cause,) when, from loss of sleep, occasioned by severe pain, he was unable to attend to his business. I was sent for, and found him considerably reduced, both in mind and body, nervous, slightly feverish, with quick pulse and very restless, complaining of pain in the bone extending to the shoulder joint. There was but little undue redness or swelling, and no external openings or appearances of any having existed. After a careful examination, I decided that nothing but the removal of the remaining portion

of the humerus would prove effectual. Hence, on the following morning, I proceeded as follows: making an incision from the tip of the acromion process to the lower end of the diseased bone, which gave vent to a quantity of green and bloody pus, accompanied with a peculiar odor that always attends the escape of long pent up pus with diseased bone; it was with considerable difficulty that the bone was detached, there being anchylosis between the head of the bone and joint. The humerus being entirely removed, I was a little surprised to find the disease extended to the glenoid cavity and anterior border of scapula. An incision was now made from top of the acromion process along the anterior border to the anterior and inferior angle of the scapula, nearly half that bone being removed by the bone forceps, including the glenoid cavity; the diseased bone being all removed, the wound was well cleansed with a solution of carbolic acid, tents soaked in the same solution left in the cavity, the parts were bronght together with the ordinary suture, and cold water dressings sparingly applied. The patient done well, and returned to his home, in Iowa, eight days after the operation. A solution of carbolic acid was injected in the wound every day for three weeks after, to favor healthy granulation. The patient is yet perfectly free from any symptoms of the former difficulty, and healthier than ever before. Carbolic acid is, in my opinion, one of the most valuable remedies we possess for diseased bone, having had numerous cases to test the value of it.

ARTICLE V. — *Abnormal situation of the Anus with Intestinal Calculi.* By B. C. BRETT, M.D., Broadhead, Wisconsin.

HEREWITH I transmit the report of a case which may be interesting to the medical gentlemen who read your journal, not because there is anything striking in an operation which the good sense of any physician would have suggested, but because of the rarity of circumstances which would call for such an operation.

I was called, December 10, 1869, to see B. G., a little girl, ten years old. On arriving, I learned from her mother the following history:

She was congenitally deformed; the anus being too small and situated too far forward. Her health was always poor, owing, as she thought, to the heavy doses of cathartics which she was obliged to take. When she was two years old she discovered some plum seeds in the rectum, and, with a bent wire, succeeded in bringing out some of them; but others remaining, had seemed to increase in size until their presence became a serious hindrance to defecation. The dejections were never larger than a clay pipe-stem.

On examination, I found an anal aperture a half-inch in diameter, when fully distended, communicating with the rectum by a canal three-fourths of an inch long, and situated close to the posterior commissure of the labia majora. In fact, the perineum consisted of simply a continuation of the recto-vaginal septum of a uniform thickness from above downwards. The normal point for the anus was marked by a faint red line and slight depression about an inch in rear of this opening. Having passed a sound into the rectum, I found it unusually large, it having been subjected to almost constant distention for several years. At about four inches from the orifice I detected a concretion, which I brought down by using the sound, bent in the shape of a hook. Having grasped the stone with a pair of slender polypus forceps, I found it too large to remove except by crushing, or by enlargement of the aperture, which latter operation, in consideration of the abnormal size and situation of the anus, seemed advisable. Accordingly, having put the patient under chloroform, the posterior wall of the canal was incised to the depth of over a half inch, when the stone was removed without difficulty. I also detected and removed three others. To prevent union of the cut surfaces, and thus insure permanent enlargement of the anus, the finger has been used as a bougie once a day. The patient is now walking about, retains her fæces well, has an easy and free evacuation each day, and enjoys better health than ever before.

The largest of the stones removed measured three and a half inches in circumference. They were all ovoid in form, and nearly equal in size. Having divided one of them, I find it composed of concentric layers of what appears to be carbonate and phosphate of lime, having a plum seed for a central nucleus. The probability is that these seeds which, in a well formed child, would

have passed readily out, in this case had remained in the rectum, gradually increasing in size, for these eight years.

To what extent this patient will experience the need of a better perineum if she lives to become a mother, is an interesting query.

ARTICLE VI.—*Addendum to Article of H. Culbertson, M.D., Assistant Surgeon United States Army (Retired) in* THE CHICAGO MEDICAL JOURNAL *for March*, 1870.

IF "*form*" is understood to relate to "arrangement of particles," as well as to "figure," such a basis in medicine would not be a unit, as it would refer to "arrangement" and "figure." It would seem that the basis of any system of medicine should be a unit, and that there is no definition of "form" which can rightly and generally apply in the consideration of the magnitude, density, porosity, temperature, attraction, repulsion, elasticity, expansion, contraction, rest, statical and dynamical relations, weight, friction, hardness, resistance to fracture, endosmosis and exosmosis, capillarity, pneumatic relations, and to the origin and death of organic bodies. It would seem more definite and scientific to look at these several qualities directly, and not indirectly, through the medium of "form," which, thus employed, is at best but a mere classification, and serves to cover up the diverse relations and processes going on in an organic body.

The third division of my friend, of the principles operating in an organic body, is "form-force." This, it is claimed, is nothing but the old term "vitality" applied to "form," with the object of rendering the subject more clear, by or through "form." If the term "form-force" be applied to the whole animal body as a "form," then the parity in the expression "vitality" and "form-force," will be apparent, for each thus considered relates to the power which maintains the life-body entire. Thus viewed, "form-force" is "vitality;" but the "force" of this "form" is still a mystery, and the numerous phenomena which take place in such a "form" are no more comprehensible through the expression "form-force" than through the term "vitality."

ZANESVILLE, OHIO, *February* 15, 1870.

ARTICLE VII.—*Report of a case of Diphtheria, followed by Epilepsy.* By N. BRIDGE, M.D., Chicago.

MR. T. B. W. S., English, aged about 35 years, has been many years in America and been employed as a clerk writing most of the time. He is slim and spare of frame, but says he has always had excellent health. During the past year, as his wife since avers, reverses of fortune have made him low spirited and hypochondriacal; has had from time to time momentary attacks of mental wandering, would often stop what he was doing, look vacantly a moment, make some strange remark and then appear natural; he has seemed, at times, almost stupid, would sleep much of the time and was easily imposed upon. He came to Chicago in October, 1869, and went to work in a packing-house as a laborer.

He was attacked with diphtheria about December 1. I was called December 5. His attack did not seem severe; yet he was apponic — speaking only in a whisper, had a not very thickly-coated tongue which was somewhat dark colored. False membrane was distinct and was beginning to loosen; there was anoresid, soreness of outside of throat with slight swelling, pain, not very severe, on right side of head; had not taken to his bed, and his nights had been quite sleepless, pulse 80.

Ordered gargle potass chloras, 3 minims hydrochl. acid and 10 m. tr. belladonna every three hours. Dov. pul. 4 grs. at night. Water compresses to the throat, and nourishment.

This treatment was continued, the patient improving, till the 10th, when 2 grs. quinine was ordered every morning.

He improved steadily, his appetite gaining until the 13th when, at night eating largely of oysters, he was attacked soon after supper with vomiting and a true epileptiform convulsion; the fit was repeated several times during the early part of the night and again near midnight. Gave dose — about 20 grs. — of bromide potass., a goblet of wine, 3 grs. quinine and $\frac{1}{4}$ gr. of morph. during this time. He fell asleep at 2 o'clock in the morning and had no more trouble.

He had no more fits until the night of the 16th, taking his two grs. quinine and a little wine at meal time. He was on the 15th much excited all day, and the following day. On the 16th late

P.M., he got very indignant about something and in the early evening had another convulsion. These continued to occur every 20 or 30 minutes for some hours. The paroxysms were short, would often last not more than half a minute and seldom over a minute; they began with a sighing sound often, paleness, tonic spasm, dilation of pupils, followed by slight clonic action, flushed face, etc., as in ordinary epilepsy. He was, of course, unconscious during the fits, but was fully aware after each that it had occurred. As his face began to be flushed the pupils would contract promptly and naturally. Once in a while no muscular spasm could be detected whatever. He was covered with a cold, clammy sweat, and said he felt a terrible weakness all through him.

After the first fit the pulse went down to about 33, the respiration being faster than normal. During the fits — or that part characterized by paleness, *his heart would stop beating*, and as the face became red at the close it would begin again, but much more rapidly, beating faster than normally, but soon settling down to its former slowness. The pulse felt labored and not strong, while the first sound of the heart was short and somewhat jerking; no other abnormality could be detected in it from first to last.

At 7 P.M. he was given 3 grs. quinine, ½ gr. morph. and 4 ℥ port wine, with mustard to the chest.

Convulsions grew less and I left him quiet and more easy at 9 o'clock. At this time the pulse was 33, full but not strong; respiration about 25 — conscious and sane.

At 11½ P.M. was called to him again and asked Dr. Walter Hay to see the case with me. The paroxysms were found occurring every ten or fifteen minutes and very brief; pulse 28; weaker respiration 28; great feeling of weakness; cold, and moist skin. He was ordered whisky ℥ ss every 2 hours, with beef tea intervening; also,

℞ Ferri Bromid, - - - - - - ℥ j;
Syr. Simp., Aqua, - . - - - aa ℥ ij;

Ms. teaspoonful every 4 hours, much diluted.

On the morning of the 17th he was much the same; the nurse said he got about an hour's sleep and freedom from paroxysms just before daylight. He was given 15 grs. brom. pot. and 3 grs. quinine. The paroxysms continued during the day at short inter-

vals, and during most of the following night, not more than two hours of sleep being procured.

On the 18th — A.M. — the pulse was a little stronger and 30 per minute; respiration 28. He had, at about daybreak, vomited a little black matter. Dil. hydrocyan. acid was given twice during the day in 2-drop doses, and for thirst, which was annoying, wine and water.

At night he felt a little better, the fits which had persisted during the day, having decreased in frequency to once in every half hour; the pulse was 30, and weaker, and the respiration 25.

The brom. tarri. was now omitted and 15 grs. brom. pot. and gtt. 20 tr. digital. given every 4 hours alternating.

The 19th found him much weaker; pulse and respiration the same in frequency as the day before, and the pulse was steadier. He had, during the night, gained a little sleep, and the fits were fewer. During the early part of the day the nurse blundered and gave two doses of the digitalis, double what was ordered. The general weakness increased; the heart stopped during the most of each fit and it seemed hard to begin again, when it did it was with a nervous, jerking and weak motion. The digitalis was stopped wholly; the other treatment continued. At 5 P.M. the pulse was 30 and a deathly coldness possessed the body; he was at this time, and had been between all the paroxysms, perfectly sane and able to converse intelligently.

He died at 6½ P.M. in a fit.

No *post-mortem* examination was had.

This man doubtless had the beginning of epilepsy a year before his death, and would have died of it sooner or later had he escaped the diphtheria. The paroxysms he had were plainly of an epileptiform character; nearly all their symptoms were characteristic of that disease.

Dr. Hay at once, on seeing him, expressed the opinion that there must be a mental element as a cause of the trouble, and one which reached back many months; although the patient had assured me of his perfect health up to the time of his attack, it was learned afterward that this prediction — as recorded — was well founded.

One symptom, certainly unusual, was that of the cessation of the heart's action during the convulsions. No man or book I have

consulted tells me that the heart ever stops in the fits of epilepsy; most works say nothing about it, or only by implication say it does not. This symptom was constant during the disease, occurring to a greater or less degree in every fit I observed; then the heart was weak and labored hard.

Not less unusual was the rapid breathing; he breathed, at times, as often as his heart beat, and for nearly three days the frequency of the respiration was fully one-half greater than normal. There was no disease of the lung, the air reached to every part, the sound was normal and no obstruction or feeling of suffocation existed at any time.

What is the explanation of these symptoms? What connection, if any, had they with the diphtheria?

Did the sudden development of this phase of the epilepsy occur simply as a result of debility and impoverished blood, or was it determined by the specific nature of the disease that preceded it? If the former, why did the heart stop in every fit, why the respiration so rapid? These symptoms were too constant to be accidental, they must have had a cause, what was it?

If, from the involvement in epilepsy of a part of the nervous mass near the origin of the par vagum, the function of that nerve was disturbed, why did it not affect the heart and lungs alike? Why make the action of one much more rapid than normal and that of the other less than half its wonted frequency?

Are the origins of the respective filaments of this nerve that go to the heart and the lungs so distant and distinct that they could have been so differently affected by a lesion in their neighborhood? If such a condition were supposable, is the lesion of the medulla and cord in epilepsy likely ever to be sufficiently circumscribed to allow of this?

Now, diphtheria is frequently attended with paralysis of certain muscles as sequels, occurring some days after the force of the disease is spent; while the paralysis, as a rule, is confined to a few parts, many different muscles are from time to time affected; those of the voice, the face, of respiration, and once in a while those of the heart, are involved. The paralysis is not always, if indeed often, complete, the muscle being simply impaired in power, not wholly disabled.

Is it unreasonable to believe that in this case the muscular struc-

ture of the heart was so affected; not paralyzed, but so weakened that it with difficulty moved; so much debilitated that, at the beginning of each paroxysm, by the peculiar nervous spasm or a peculiar state of the capillary circulation at that moment, it was stopped altogether, to begin again when the capillary circulation and normal nervous conditions were restored?

If such a view is admissible, may not the rapid breathing be explained by supposing that the lungs in answer to the normal action of the pneumogastric took on an increased action to more fully ærate the blood, a work which was highly necessary from the slowness with which it moved through the lungs? The character of the breathing differed in no wise from that which often occurs from the action of too much carbon, or other effete matter in the blood as in violent exercise or in a bad atmosphere. Moreover, if this notion be correct, if the walls of the heart were weakened, how did the case differ, so far as the heart was concerned, from some cases of angina pectoris, when, as authors aver, the heart dilates without power to contract and expel its contents and the patient keeps motionless for fear of death?

Correspondence.

"FORM AND MOTION."

ZANESVILLE, OHIO, *March* 2, 1870.

To the Editors of THE CHICAGO MEDICAL JOURNAL:

PLEASE convey to your critical correspondent* my thanks for calling attention to my communication,† in which form and motion were pointed out as the physiological and physical unities of organic life. Say to him he may hew away at his, not mine, ideals of "figure" and "moving about," to his heart's content, and I shall never say, stay thy hand.

As he said nothing for or against form and motion as I used

* CHICAGO MEDICAL JOURNAL, *March*, 1870, p. 134.

† CHICAGO MEDICAL JOURNAL, *January*, 1870, p. 6.

them, no further reply than this acknowledgment of my thanks for his courtesy is necessary.

To reproduce in other minds the exact impressions of our own, by the arbitrary symbols of language, has ever been environed with difficulties.* The tiresome repetitions in legal documents are due to this cause, though other illustrations are neither far to seek nor difficult to find. To avoid this in science, new words are coined to express different shades of meaning from those in common use; though these differences have to be pointed out in common words at last; and the use of new or unusual words, where no pressing necessity for such exists, savors of pedantry.

In my case this seemed unnecessary, as "form and molecnlar motion," as commonly understood, appeared to be sufficiently definite, especially as they were illustrated by actual clinical cases.

Since the publication of my memoir in THE JOURNAL, the following remarks on form and motion I find in an apparently recently published work,† as there used. The author does not, however, claim for them the importance to which my investigations have led me, nor did they meet my eye until after the appearance of my memoir in your pages. They, perhaps, are better than my own, because they, apparently, are calculated to reproduce in the minds of others my own mental impressions, which are here represented with a good deal of exactness.

"True idea of form." "We may repeat here that in the true idea of the Form of an object is involved not merely its *structure*. or that part of its nature which the anatomist is concerned with; it includes also the whole of the qualities and dispositions which pertain to it, and which distinguish it *socially* from other things. And this, in fact, is its *essential* nature, being that which gives it a place and a function in the general economy of creation; thus the object and end for which it was created. The end is always nobler than the Means, for the means are only processes by which the end shall be attained. In all our groupings and classifications, therefore, we should view the organic structure as

* *Atlantic Monthly*, October, 1864.

† *Life; its Nature, Varieties and Phenomena;* by Leo. H. Grindon; 5th American edition; 1869.

intermediate between the Artist and the end He has in view." Page 495.

"Reviewing these various and wonderful processes, we cannot fail to observe how, in its every phase and expression, the great sign and certificate of life is MOTION. Usefully, then, may we pause upon the consideration of it as a kind of summary and continent of vital phenomena. Nothing exists independently of motion as its cause; by reason, likewise, of motion, all things hold together and preserve their form. 'Passive life,' sometimes spoken of, is a contradiction in terms; certain states of being may be relatively passive, but there is no such thing as absolute passivity. In no case a state *ipso facto*, passivity is everywhere an incident of motion, consequently to be referred to motion, and to be explained by motion. Doubtless there is a great diversity in the degree and amount of motion; also in its manifestation to the eye. We must not confound it with *moving about*. Motion, ordinarily so called, implying visible change of place and position, and furnishing us with ideas of time, does not comprise the All of motion. There is motion which no eye can perceive, motion which we are made aware of only by witnessing its results. Of this kind, indeed, is the chief part; the most wonderful and efficient movements in the world are those which proceed in secrecy and silence. The feebler and briefer the exhibition of motion, especially the latter, the lower is the expression of life; the more energetic and continuous it is, the higher is the life—so apart from structure, motion is a criterion of vital excellence, of course under the reservation that the quality of life depends primarily and essentially on its End; else would the sea be more living than a plant; and a watch, or other piece of self-acting mechanism, commend itself as of nobler nature than many animals." Page 100–101.

If agreeable to you, further illustrations, based on clinical cases, will be prepared for your pages during the present year.

Z. C. MCELROY, M.D.

Foreign Items.

M. Fleury reports to the *Gazette des Hopitaux* a case of spontaneous popliteal aneurism, treated under his direction, at l'Hotel Dieu de Clermont-Ferrand, by flexion, resulting successfully, after eight days' treatment.

The subject, a cavalry soldier, jarred his right knee in the act of mounting his horse, the left foot being already in the stirrup. The consequences were pain and swelling in the knee and the development of an aneurism as large as an egg. Six months afterward, upon his admission to the hospital, the compressor of Dupuytren was applied, but was discontinued in consequence of the œdema of the limb resulting from its use. The patient, a very intelligent man, in obedience to instructions, kept his leg flexed upon the thigh during several consecutive hours at a time, even when sitting, suspending it only to walk about occasionally. This treatment, continued during eight days, resulted in a complete cure.

M. Verneuil reports to the Imperial Surgical Society, the extraction of three uric-acid calculi, weighing respectively 98 and 27 grammes (weight of smallest not given), by the median operation, from the prostate gland of a patient aged 64 years, followed by complete recovery.— *Gazette des Hopitaux.*

M. de St. Germain presents to the same society the results of twelve experiments upon the influence of electricity upon parturition, as follows:

1st. In no case could uterine contractions be induced, unless they had already occurred spontaneously.

2nd. In each case in which the contractions, having already commenced, recurred at intervals of fifteen or twenty minutes, the application of the conductors to the lateral regions of the abdominal surface was followed in about ten minutes by a considerable acceleration in the uterine contractions.

3rd. Each contraction induced by electricity was of much longer duration and much more severe than the others.

4th. The dilatation of the neck appeared to proceed constantly with rapidity under the influence of galvanic excitation.

5th. In all the cases observed by us up to this time, the expulsion of the placenta has followed immediately that of the infant. It was either projected spontaneously outside of the vulva immediately after the expulsion of the fœtus, or was found in the vagina, and withdrawn without the least traction.

6th. Twice only was a slight bluish discoloration observed upon the infant, and in one of these the cyanosis could be attributed to the closely encircling cord. — *Gazette des Hopitaux.*

M. Salmon de Champotran, an official of the Council of State (Paris), who died a few months since, has left to the Faculty of Medicine of Paris, a legacy to found a chair of The History of Medicine. The contest for the chair is warm, the most prominent candidate being M. Bouchut, of the children's hospital, so well and favorably known by his clinical lectures, by his investigations in general pathology, and his Treatise on the History of Medicine and Medical Doctrines. — *Gazette des Hopitaux.*

M. See, in his introductory to the course of lectures upon the Application of Physiology to Medicine, at l'Hopital la Charité (Paris), gives the following as the results of the injection of the constituents of bile into the veins of an animal.

By separating the coloring matter and injecting the biliary acids, the following series of constant phenomena are produced:

1st. The retardation of the pulse by the excitation of the vagus nerve; the pneumo-gastric nerve being the antagonist of the motor ganglia of the heart, its excitation induces a retardation (of the pulse), which is likewise produced by the biliary acids exactly as by digitalis, more promptly and more surely, however.

2nd. The cutaneous itching may be explained by the excitation of the extremities of the sensitive nerves of the skin by the cholic and choleic acids.

3rd. The constipation is due to a great extent to the absence of these acids from the intestine. In the normal state they produce upon the muscular plane which is manifested by the contractions of the intestinal muscles; if this excitation is absent, there is retention of the fæces.

The action of the bile itself containing its coloring matter gives other results.

1st. The coloring of the fæcal matters, if this no longer flows into the intestine in consequence of obstruction of the biliary conduits, the stools are discolored, grayish.

2nd. The penetration of the bile into the blood when it finds its natural emunctories obliterated, determines the impregnation of all the tissues, and principally of the very vascular tissues, by biliverdin.

3rd. Once introduced into the blood, it tends to eliminate itself, hence the coloring of the different secreted liquids and more particularly of the urine.

Such is the origin, long misunderstood, of the phenomena which supervene in icteric maladies.

The same distinguished physiologist explains the syncope (sometimes mortal), resulting from a blow upon the epigastrium, thus:

This violent blow occasions very active excitation of the abdominal segments of the pneumo-gastric nerve, which is transmitted to the medulla to be reflected upon the cardiac filaments of the pneumo-gastric, thereby inducing a diminution or even an arrest of the pulsations of the heart.

Moreover, there is associated with the pneumo-gastric the depressor-cardiac nerve of Cyon. This nerve, when excited, has the power to diminish considerably pressure in the vessels and consquently to weaken the circulation. Now this same excitation originating in the abdomen, involving the pneumo-gastric, is propagated likewise to the nerve of Cyon, and induces, by the intermediation of the medulla oblongata, a paralysis of the splanchnic vaso-motos and a consecutive dilatation of the vascular system; hence simultaneous weakness of the heart and of the vessels; hence diminution of the circulation and consequently cyanosis.

M. Roussin, in a paper read before the Imperial Academy of Medicine, upon hydrate of chloral, its new mode of preparation and the characteristics of its purity, affirms that this agent absorbed or ingested into the economy, in any manner whatever, must be converted rapidly into alkaline formiate or chloroform. — *Gazette des Hopitaux.*

The same author explains the tolerance of tartar-emetic in pneumonia, thus: When the pneumonia is extensive there is diminution of the respiratory surface, that is to say, the beginning of asphyxia, which is the cause of the tolerance, as we shall presently prove. In pneumonias of limited extent, however, and which only occasion a slight obstacle to respiration, the tolerance of tartar-emetic does not exist.

If in a case of pneumonia sufficiently extensive to diminish the respiratory surface, and to determine at the same time intense fever, the emetic does not provoke vomiting, it happens that, in consequence of the imperfect interchange of gas and atmospheric air in the lung, the carbonic acid is not eliminated from the blood; this accumulation of carbonic acid, which is characteristic of asphyxia from its beginning, paralyses certain portions of the nervous system, either of the periphery or of internal organs.

Amongst these latter nerves is the pneumo-gastric, in that portion of it which is distributed to the respiratory and gastric organs; hence the antimonial poison no longer produces upon the gastric filaments of this nerve, either at their periphery or at their centre, the centripital impression which is the point of departure of all vomiting. The vomiting is, in fact, nothing else than the reflex excitation of the nerves which are distributed to the diaphragm and to the abdominal muscles whose contraction effects the evacuation of the stomach. In this effort, the muscles of the abdominal cavity alone act, *the stomach is nearly inert*, it may on this account be replaced experimentally by a pig's bladder. This contraction of the muscles, and the nervous excitation in which it originates, can occur only by the aid of a central or peripheral impression; now, if the sensitive nerves have lost their sensibility, the first impression can no longer be produced, there is no more vomiting; it is exactly this impression which the carbonic acid destroys in the nerves.

Further, when carbonic acid exists in great quantity in the blood, there is perceptible not only a cutaneous anæsthesia, but likewise an anæsthesia of deep seated organs; the visceral nerves, especially the pneumo-gastric no longer respond to impressions, absolutely as the nerves of the skin. Tartarised antimony once injected into the veins, may in passing through the vascular system, excite the gastric termination of the vagus nerve,

or its origin in the interior of the medulla, which thus provokes vomiting. Tickling of the throat occasions vomiting by peripheric excitation of the pneumo-gastric, the pharynx owing its sensibility in great part to a branch of the vagus nerve.

A CHAIR of anthropology has just been established at Florence in favor of professor Mantegazza, now professor of physiology at the University of Pavia.

NOVEL OPERATION.—M. Hervey de Chegoin reports, October 13th, to the Imperial Surgical Society a successful operation for cataract upon an ass 21 years of age. The size of the eye necessitated the construction of special instruments, and the large size of the pupil and the softness of the lens permitted the passage of a portion of it into the anterior chamber, from which it soon disappeared by absorption. The operator remarks naively enough, that owing to the difficulty of adopting biconvex lenses, the patient was enabled to pursue his occupation (which was principally eating), without them. — *Ibid.*

EPILEPSY.—Dr. Octave Huard, of New Orleans, U. S., reports to the *Gazette des Hopitaux* (Paris), the following statistics of a case of Epilepsy in a patient aged ten years, treated successfully by Bromide of Potass, viz.:

Approximate number of attacks from the beginning of the disease up to November 1st, 1867, 2000. November, '67, 59. December, '67, 84. January, '68, 116. February, '68, 83. March, '68, 105. April, '68, 87. May, '68, 98. June, '68, 129. Total 2743. Treatment with Bromide of Potass was commenced July 1st, 1868, since which the number of seizures have been as follows: July, 1868, 65. August, '68, 88. September, '68, 13. October, '68, 7. November, '68, 7. December, '68, 31. Total 211. Thus during three years previous to the beginning of the treatment the number of attacks was *about* 3000.

During the eight months immediately proceeding, *positively* 763 attacks. During the six months immediately after the commencement of the treatment, 211 attacks.

The diminution of the number of the attacks commenced, only after two months, when the system was nearly saturated with the

medicine, that the improvement was manifested in a remarkable manner.

The increase in the number of seizures during December over November was due to the suspension of the medication. No attack having occurred in three weeks. — *Ibid.*

THERAPEUTICAL Society of Paris. M. Gubler recognized in two patients, a painter since dead, and a tinner still under treatment, epileptiform phenomena positively due to saturnine intoxication only; for there was no evidence, especially in the second patient, to show that these individuals were alcoholized.

It is somewhat difficult to establish clearly the differential characteristics of poisoning by lead and by absinthe in consequence of the epileptiform attacks.

In the first patient, the coma persisted more than twenty-four hours; then under a dose of 6 grammes of Bromide of Potassium this patient was partially relieved, then sunk gradually.

The second patient experienced very violent attacks, and was gradually restored by the use of Bromide of Potassium.— *Gazette Medicale.*

Selected Articles.

ARTICLE I. — *On Relapsing Fever.* A Lecture by AUSTIN FLINT, M.D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in the Bellevue Hospital Medical College.

[THE general interest felt in the profession and pervading the public mind on this subject, will cause our readers to excuse the less amount of our translations, and the space occupied by the following valuable observations by Prof. Flint. — ED.]

GENTLEMEN: Some weeks since, when I took up in order (as I have done for the last nineteen years), in my didactic course, relapsing fever, I stated that there were cases then under observation, at Bellevue Hospital, which presented the characters of that disease. I had not then observed the cases sufficiently to feel quite sure concerning the nature of the disease. I afterward

stated that there could be no longer any doubt as to the correctness of the diagnosis, and promised to devote to the disease some further consideration. I propose to redeem that promise in my lecture to-day.

Let me first name the publications which you may consult for facts, chronological and geographical, relating to the past prevalence of this disease; and also, for a fair exposition of the knowledge contained in medical literature respecting it. I shall content myself with doing this, for I do not wish to occupy your time with historical details which you can, if you choose, glean from books at your leisure.

You will find this disease treated of concisely in most, if not all, of the late works on the Practice of Medicine. It is considered fully in Murchison's excellent treatise on the continued fevers of Great Britain. In the *British and Foreign Medico-Chirurgical Review*, number for July, 1851, you will find a very able article on the Continued Fevers, including relapsing fever, with numerous bibliographical references. A list of successive epidemics, in Scotland, Ireland and England, is given in that paper. Dr. William Jenner, in addition to an account of an epidemic which he studied in 1847, submits facts establishing the non-identity of relapsing with typhus and typhoid fever, in a paper published in the *Medico-Chirurgical Transactions*, vol. xxxiii, new series, 1850.

In this country, exclusive of systematic treatises on the Practice of Medicine, medical literature contains very little relating to relapsing fever. Judging from the little that has been published, the disease, with a very few exceptions, has not heretofore existed on this side of the Atlantic. Dr. Meredith Clymer observed and described fifteen cases, occurring at Philadelphia in 1844.* Dr. A. Dubois reported a few cases, occurring in New York, in 1848.† I recorded fifteen cases at the hospital in Buffalo, 1850–'51; and I gave the results of the analysis of these cases, together with an account of the disease as described by British writers, in my work entitled, "Clinical Reports on Continued Fever, based on an Analysis of one hundred and sixty-four Cases." This work, which I suppose to be now out of print, was published in 1852.

The circumstances under which these fifteen cases came under my observation were as follows: In 1850–'51, I was engaged in the study of continued fever. Of forty-eight cases which I recorded and analyzed in those years, following the example of Louis, fifteen were distinguished by the occurrence of a relapse

* *Vide* Treatise on Fevers, 1841; also, Notes in Aitken's Science and Practice of Medicine. American edition.

† *Vide* Transactions of American Medical Association, vol. ii.

after convalescense had appeared to be established. I was then unacquainted with the distinctive characters of relapsing fever; and, of these fifteen cases, nine were included in the group of cases of typhoid fever, one case was considered as typhus, and five cases were placed by themselves and called cases of doubtful type. The question, whether these fifteen cases were cases of relapsing fever, arose after reading the article in the *British and Foreign Medico-Chirurgical Review* to which reference has been made. I then analyzed these fifteen cases separately, and found that the facts corresponded, in all respects, with the history of relapsing fever. The results of the analysis are given in my "Clinical Reports on Continued Fever," and I shall refer to them, in connection with the clinical history of the disease, in this lecture.

Some of the different names by which the disease is now, and has been heretofore known, are to be mentioned. In past literature it has been called "five-day fever," "seven-day fever," "short fever," "mild yellow fever." By some of the British writers it is distinguished as "famine fever," and by some German authors as "hunger pest." The name "relapsing fever" is based on the most striking of its peculiarities, and it involves no hypothesis; it is therefore to be preferred to any other, with our present knowledge.

By way of introduction to the consideration of important questions concerning the disease, I will read a report of one of the first of the cases received into the hospital — a case which is typical as regards the prominent, distinctive features of this species of fever; and I will then introduce a patient, who is supposed to be passing through the primary paroxysm, and also a patient who has passed through the disease, and is now convalescing. The report which I shall proceed to read was drawn up by Dr. William M. Polk, senior assistant physician on the third medical division:

Henry Cordon, aged seventeen, a native of this country, by occupation a laborer, was admitted December 17, 1869. He came from No. 37 Mulberry street, and he stated that several persons in the house in which he lived had been ill with the same kind of fever. He had been exposed to many hardships, inclusive, probably, of a want of proper food.

He was well, up to four days before his admission, when he was seized with a chill, followed by fever and pain in the limbs. He had no epistaxis, nor diarrhœa. He suffered much from headache. On his admission the pulse was 110. He then complained of severe muscular pains. The bowels were constipated. The skin was hot, but moist. There was no eruption; there was no jaundice.

December 18, the day after his admission, he was free from fever. The pulse and temperature were normal. There was profuse perspiration on this date.

He continued free from fever from the 18th to the 28th, that is, ten days. The last four of these ten days he was sitting up. He continued, however, to complain of muscular pains, and he was quite weak.

On the 28th of December, after getting up, at 7 A.M., he felt chilly sensations, and soon returned to bed. The pulse was now 100, and the temperature in the axilla was 100°. At evening the pulse was 110, and the temperature 101°. On the 29th, the pulse was 120 at A.M., and the temperature 102°. He had epistaxis for a few moments, on this date, and diarrhœa. The fever persisted, without any abatement, for the two following days, the pulse being 120, and the temperature 102°. On January 1, at 9 A.M., the pulse fell to 90, and the temperature to 100°. He was then perspiring profusely. At 6 P.M. the pulse and temperature were normal. Free perspiration continued. The muscular pains had continued to be, and were still, severe.

The relapse of fever thus ended, after a continuance of five days. After January 1 there was no return of fever. On the 13th of January he was able to sit up. He convalesced without any drawback, and was disharged, quite well, January 24. There was no eruption of any kind. The diarrhœa continued only two days, and was slight.

The treatment was as follows: Ten grains of quinine were given daily, for the first four days, in one dose, at noon; and two grains three times daily, during the intermission. Dilute nitric acid was given during the continuance of fever. Bismuth, kino, and opium, were given to relieve the diarrhœa.

The points in this case to which your attention is to be directed are, the abruptness of the attack; the continuance of high febrile movement for five days; the sudden and complete disappearance of fever, profuse perspiration occurring at the same time; an apyrexial period of ten days; an abrupt relapse of fever, lasting five days, the second febrile career ending suddenly, with profuse perspiration, and convalescence then taking place; the prominence of muscular pains, both during the fever and in the intermission; the residence of the patient in a house where this fever existed; his suffering from deprivations before being attacked; and, finally, the absence in the history of the characters which distinguish, severally, typhus, typhoid, and remittent fever.

I shall now introduce a patient who is supposed to be passing through the primary febrile career of relapsing fever. The patient is a girl, fourteen years of age. She was admitted with fever, which has now continued for five days. The pulse is 140,

and the axillary temperature 101°. Now let us consider the question, What are the grounds for supposing this to be a case of relapsing fever?

In the first place, it is an essential fever of some kind, for a careful examination of the different organs of the body has failed to disclose an acute inflammation anywhere; it is not, therefore, a symptomatic fever. It is not one of the eruptive fevers, for there has been ample time for the eruption and other diagnostic characters of these fevers to become manifested, and they are wanting. If not relapsing fever, it must be a febricula, or remittent fever, or typhus, or typhoid fever. The duration and the intensity of the febrile phenomena show that it is not a febricula. None of the characters of remittent fever have been exhibited. The abruptness of the attack, and the absence of the abdominal symptoms of typhoid fever, warrant us in saying that it is not, in all probability, that disease. Finally, were the disease typhus fever, it is time for the eruption to have appeared, and this is rarely wanting in cases of typhus. The eruption is not present in this case; moreover, there is not the dusky hue of the face which characterizes typhus; nor is there the physiognomy representing the mental condition which belongs both to typhus and typhoid fever. There has been no incoherency or passive delirium, and the patient is now able to give an accurate account of the past and present symptoms.

Thus, gentlemen, you see that the diagnosis is reached, at the present time, in this case, chiefly by exclusion; but, if the disease be relapsing fever, we may expect daily a sudden cessation of the febrile symptoms, and a period of apyrexia, or an intermission, which will probably be followed by a relapse. The diagnosis will then be confirmed.*

Before this patient is removed, let me call your attention to the presence of petechiæ on the lower limbs. The small, round, dark spots which you see are truly petechial, that is, they are minute extravasations of blood, or ecchymoses. They may occur in relapsing fever, as in typhus or typhoid fever, and also, in various diseases. They have no diagnostic significance, nor do they denote an unusual gravity of disease.

I now introduce a patient who is convalescing from relapsing fever. The first career of fever was seven days, in this case; then followed an intermission of seven days. The relapse of fever lasted only four days. He is able to walk up to the amphitheatre, and is nearly well enough to be discharged.

The remainder of my lecture I shall devote to a brief consideration of the following questions: What points in the clinical

* The subsequent history of this case corroborated the diagnosis.

history of relapsing fever are distinctive of the disease; and has it any anatomical characteristics? What are the grounds for considering this disease as a distinct species of fever? What are the points involved in the diagnosis of relapsing fever? What is the existing state of our knowledge of its causation? What is the prognosis? And, lastly, what are the indications for treatment? These questions I shall take up *seriatim*, following the order in which they are stated.

What points in the clinical history of relapsing fever are distinctive of the disease; and has it any anatomical characteristics? My remarks under this head, as well as in relation to the other questions, will be based, not exclusively on the information to be obtained from the writings to which reference has been made, but on the observations in this hospital during the present prevalence of the disease. Through the zeal and assiduity of the house physician of the third medical division, Dr. Thomas J. Moore, I have been furnished with sixteen recorded histories. These histories have been recorded with care, the pulse and axillary temperature having generally been noted twice daily. I am much indebted to this gentleman for his interest and fidelity. I should add that most of the cases were under my observation. Dr. Moore has also furnished a tabulated statement of statistical facts relating to the cases throughout the hospital.* I have carefully analyzed the sixteen cases just referred to. In addition, I have the results of an analysis of the fifteen cases which I observed and recorded in 1850–'51. The two collections thus make thirty-one recorded cases.

Abruptness of invasion characterizes the disease. The attack is sudden. There is no prodromic period. The seizure is almost always marked by a well-pronounced chill, which is immediately followed by febrile movement. Usually, the patient at once takes to the bed: but, in some cases, one, two, or three days pass before there is this evidence of yielding to the disease. Moderate perspiration occurs shortly after the fever begins, in a considerable proportion of cases. This was noted in seven of twelve cases which I formerly observed. It is noted in the histories of several of the cases recently under observation. The perspiration in some cases is abundant, and it may recur repeatedly during the continuance of the febrile paroxysm.

The fever attains quickly to either considerable or great intensity, as denoted by the pulse and axillary temperature. Thus, of two cases in which the disease was developed in the hospital, in one, the pulse on the first day was 120, and the temperature 103°; in the other case, the pulse on the first day was 130, and the tem-

* This statement is appended to the lecture.

perature was 103°. During the continuance of the first paroxysm, the pulse and temperature generally denote a persistent intensity of fever, the pulse ranging, in different cases, from 100 to 140, and the temperature from 100° to 105°. The oscillations are rarely great, and those which occur are irregular in their occurrence.

The cessation of the fever is as abrupt as the accession. The pulse and temperature quickly fall to nearly or quite the normal standard. The transition from high fever to complete apyrexia takes place, often, in a few hours; usually this is accompanied by profuse perspiration, which continues for several hours, and even an entire day. Not infrequently, the pulse and temperature fall below the standard of health. In two of the cases recently under observation, the pulse fell to 54, and in one case the temperature to 95°. In a day or two both the pulse and temperature rise again to the normal standard.

The duration of the primary paroxysm is stated to be, in the majority of cases, from five to seven days. Exceptionally, it may be only two days, and it may be twelve days. In the cases which I formerly observed, the average duration was nine days, the maximum being twelve and the minimum six days. Of ten cases, among those recently observed, in which the duration was definitely determined, the minimum was four days, the maximum eight days, and the average duration was a fraction under six days.

During the apyrexial period or intermission, the absence of fever is complete. It is incorrect to call this period a remission; the fever does not remit, but it intermits. The average duration of this period is stated to be about seven days; but it may not exceed two or three days, and it may extend to twelve days, or even more. In the cases which I formerly observed, the average duration was five days, the longest being eight, and the shortest three days. Of the cases recently observed, the minimum duration of this period was five days, and the maximum nine days. The mean duration was a fraction over six days.

The relapse, like the primary attack, is sudden. It is generally ushered in by chilly sensations, but not so constantly by a well-pronounced chill as the first paroxysm. The fever in the relapse quickly becomes more or less intense. The intensity may exceed that of the first paroxysm. But, in the majority of cases, the intensity is less. The relapse also ends suddenly, and in most cases with profuse perspiration.

The duration of the relapse is stated to vary between three and five days. It may, however, be only twenty-four hours, and it may extend to ten days. In the cases which I formerly observed, the minimum was two days, and the maximum ten days. The mean duration was six days. Of the cases recently under obser-

vation, the duration of the relapse is noted in eleven. The shortest duration was three days, and the longest was eight days. The average was four and a half days.

It is to be borne in mind that the relapse does not always take place. It was apparently wanting in one of the cases recently observed. On the other hand, a second, a third, and even a fourth and a fifth relapse have been observed. In none of the cases which I have seen has there been more than a single relapse.

To illustrate the course of the disease, as represented by the pulse and axillary temperature, I will read the daily record of these symptoms in the history of a case which is selected as typical.

The patient was admitted into Bellevue Hospital on the fifth day of the disease:

	PULSE.	TEMPERATURE.	
5th day	105	102.5°	
6th "	104 A.M.	103.5° A.M.	
" "	108 P.M.	103.5° P.M.	
7th "	90 A.M.	102.5° A.M.	
" "	96 P.M.	101° P. M.	
8th "	88 A.M.	103° A.M.	Profuse
" "	114 P.M.	104° A.M.	perspiration.
9th "	60 A.M.	96° A.M.	
" "	68 P.M.	97° P.M.	
10th "	60 A.M.	98° A.M.	
" "	54 P.M.	96° P.M.	
11th "	56	98.5°	
12th "	64	98°	
13th "	64	98.5°	
14th "	100 A.M.	105° A.M.	
" "	105 P.M.	105° P.M.	
15th "	96	102°	
16th "	114	104°	Profuse perspiration.
17th "	66	91°	

The points which have been presented are those most highly distinctive of relapsing fever. It remains to notice certain other points, belonging to the clinical history, which are more or less characteristic.

Of symptoms referable to the digestive system, nausea and vomiting occur sufficiently often to be somewhat distinctive, especially when this disease is contrasted with typhus and typhoid fever. Not infrequently, these symptoms are prominent and persistent during the febrile paroxysms. The matter vomited is green or yellow, from the presence of bile. The tongue presents nothing distinctive; it is generally coated, and in some cases becomes dry and fissured. The vomiting of blood, presenting

the character of "black vomit," has been observed; but it is a very rare symptom, and I have not heard of its occurrence in any case during the present prevalence of the disease. It is generally associated with hæmorrhage in other situations, and it is to be considered as an accidental event, not as an element of the disease. It probably denotes a scorbutic complication. Diarrhœa occurs very infrequently; constipation is the rule. The diarrhœa, when it occurs, is evidently accidental. Meteorism, in a moderate degree, is not uncommon; it existed in nine of the fifteen cases which I formerly observed. In only one case, however, was there any considerable tympanitic distension of the abdomen. Tenderness, on pressure, over the epigastric region, existed in six of these fifteen cases. Slight tenderness in the iliac region is not uncommon. Notable tenderness exists, in some cases, over the liver and spleen; and enlargement of these organs is sometimes determinable by palpation and percussion. I have not observed a craving for food during the paroxysms, which, according to some writers, is distinctive of this form of fever. The appetite, however, returns during the intermission, and the digestion may be active in this stage.

The occurrence of jaundice may be mentioned in this connection. This event occurs in a small proportion of cases, but its infrequency in the other continued fevers renders it somewhat distinctive of relapsing fever. It was present in two of the fifteen cases which I formerly observed, and in four of the sixteen cases recently under observation. In these six of thirty-one cases the jaundice was slight, and the cases in which it was present were not unusually severe. It is doubtful if the statement that this event is an element of gravity be correct. The event is much more frequent in some epidemics than in others. The name "mild yellow fever," which has heretofore been applied to some epidemics of relapsing fever, derives whatever pertinency it has, from the occurrence of jaundice, sometimes in a considerable proportion of cases, and also from the occasional occurrence of black vomit.

A symptom referable to the nervous and the muscular system, is highly distinctive of the disease under consideration. I refer to arthritic and muscular pains, more especially the latter. During the first paroxysm, pains in the loins, the calves of the legs, and the muscles in other situations, are generally much complained of. They are never wanting, although, as regards intensity, they differ considerably in different cases. The muscular pains do not cease with the ending of the paroxysm, but they continue during the intermission; they are more or less prominent during the relapse, and they are apt to persist into convalescence.

The mental condition, perhaps, in a measure, accounts for the suffering from these pains. The perceptions are not blunted in

this disease as they are in typhus and typhoid fever. This is a negative point of distinction in contrast with the fevers just named. Another negative point is the absence of the delirium which characterizes typhus and typhoid fever. Delirium is by no means absent in all cases of relapsing fever; but the delirium is such as is apt to occur whenever there is high febrile movement, whether the fever be essential or symptomatic, and it is generally manifested only at night. In the daytime the mental faculties are generally intact. The condition known as coma-vigil does not belong to the clinical history of relapsing fever. This statement is also true of subsultus, carphologia, and other ataxic symptoms which occur in grave cases of typhus and typhoid fever. Deafness is also a rare symptom in relapsing fever.

A distinctive point, in comparison with typhus and typhoid fever, is the absence of a characteristic eruption. In most cases there is no eruption. Sudamina or miliary vesicles are sometimes observed at the time when profuse perspiration occurs; but this eruption is incidental to various affections. The same is true of petechial spots which occur in some cases of relapsing fever. Other kinds of eruption are sometimes accidentally associated. Even the rose papules of typhoid fever sometimes occur in this as they do in various other diseases.

The physiognomy presents nothing distinctive. The face is more or less flushed, as in cases of symptomatic fever. There is not that degree of capillary congestion, marked especially on the cheeks, which exists in typhoid fever, nor the dingy complexion which characterizes typhus. The expression of indifference, vacuity, or stupidity, which is a notable characteristic of the fevers just named, is rarely observed in relapsing fever. In one of the cases recorded by Dr. Moore, it is stated that, in conjunction with slight jaundice, "the face was flushed, as if there existed erysipelas, excepting the cheeks, the latter being quite pale, and the contrast giving a very peculiar appearance."

The urine in relapsing fever is yet to be studied fully. It appears, however, that, as a rule, the quantity of urine is increased, and the urea is in larger proportion than in health. Great diminution, and even suppression of the urine, however, are sometimes observed, uræmic coma and convulsions taking place, but these cases are, happily, exceedingly rare.

It may be stated, as a point somewhat distinctive of relapsing fever, that there is very little liability to serious complications. In this fact we have an explanation, in part at least, of the very small rate of fatality from the disease. Pneumonia, however occurred in three of the fifteen cases which I formerly observed; but this complication, in these cases, did not prove fatal. It did not occur in any of the cases recently under observation. Of the latter cases, in three, mild bronchitis was a complication. Diar-

rhœa and dysentery have been observed to occur not infrequently in some epidemics.

What has just been stated with respect to complications holds true as regards sequels. As a rule, important sequels do not occur. A peculiar form of ophthalmia, which was described as following the cases reported by Dr. A. Dubois, of this city, in 1848, is an exception to the rule. It has been repeatedly observed as a sequel of relapsing fever. The peculiarities of the ophthalmia are described in works which treat of the diseases of the eye. This sequel, however, has not occurred in any of the cases which I have observed. Relapsing fever, when it attacks pregnant women, almost always leads to miscarriage or abortion. The mother almost invariably recovers, but the child, no matter how near may be the end of gestation, as a rule, is either stillborn, or dies shortly after birth.

There are no constant lesions found after death which are distinctive of this disease. The spleen is uniformly more or less enlarged and softened; but this occurs in typhus and typhoid fever. The liver is, also, more or less enlarged, but without any special appearance or structural change. Changes in other organs, which may be found, are due either to complications or to antecedent disease. It is a negative point of distinction in contrast with malarial fevers and with typhoid fever, that relapsing fever is devoid of any anatomical characteristics.

What are the grounds for considering this disease as a distinct species of fever? Is relapsing fever a special form of disease; in other words, is it a distinct species of fever? I think facts warrant a positive answer to this question in the affirmative. Let us consider briefly the grounds for this opinion:

In the first place, the laws of relapsing fever, as regards the primary paroxysm, the intermission and the relapse, or relapses, are very striking and peculiar. The clinical history, in these respects, has but a remote analogy to the different types of intermittent fever, and to the very rare instanees in which a relapse of either typhus or typhoid fever is observed. In respect of the distinctive points now referred to, relapsing fever differs essentially from any other form of fever; it stands alone. Moreover, as we have just seen, there are other distinctive points in its clinical history. That it is a distinct species of fever is a fair inference from the peculiarities pertaining its phenomena and laws.

In the second place, if it be not a distinct disease, it must be a variety of periodical, that is, malarial fever, or of either typhus or typhoid fever. Now, it may be clearly shown to lack certain characters which are essential to the fevers just named. To prove that it is not a form of periodical or malarial fever, it is sufficient to say that it has prevailed repeatedly in situations where

the special cause of intermittent and remittent fever, that is, malaria, does not exist; that it is undoubtedly a contagious disease, and that it is not controlled by anti-periodic remedies. The proof involved in these facts is so conclusive that it is unnecessary to cite further evidence. That it is not a variety of typhoid fever is shown conclusively by the absence of the anatomical characteristics of the latter disease, the so-called typhoid lesions of the small intestine; and also by the absence of the essential features pertaining to the clinical history of typhoid fever. The grounds for the non-identity of relapsing fever and typhoid fever are certainly stronger than for the non-identity of typhoid and typhus fever. The essential points of difference, indeed, are more strongly marked than those which distinguished measles from scarlet fever —diseases which were once considered as identical.

To establish the opinion that relapsing fever is a distinct disease, it is then only necessary to show that it is not a variety of typhus. It is certainly a distinct species of fever, if its non-identity with typhus be proven. The points of difference in the clinical history of relapsing fever and typhus are very marked. A relapse of typhus is exceeding rare; and, when it occurs, the duration of the primary career of fever exceeds the average duration of the first paroxysm of relapsing fever. On the other hand, the occurrence of a relapse in relapsing fever is the rule, the exceptions to which are as rare as is the occurrence of a relapse of typhus. The characteristic eruption which is nearly constant in typhus never occurs in relapsing fever, The physiognomy and the mental condition in the two diseases present wide points of difference. The fatality, which is considerable in typhus, is comparatively insignificant in relapsing fever. But the conclusive proof is that relapsing fever affords no protection against typhus. Patients who have passed through the former have repeatedly contracted, by contagion, the latter. Murchison cites an abundance of facts exemplifying the correctness of this statement. Hence it is wrong to transfer patients affected with relapsing fever to hospital wards containing cases of typhus. There are no facts showing that the contagion of typhus ever gives rise to relapsing fever. The conclusion is, that each of these two diseases has its own special poison or miasm, by means of which it alone is reproduced; that is, neither of these two diseases is capable of communicating the other. This fact is sufficient to establish the opinion of their non-identity. A fact which is distinctive of relapsing fever, as contrasted with typhus and typhoid fever, is that its having been once experinced does not afford exemption from subsequent attacks. It has been known to attack repeatedly the same person.

What are the points involved in the diagnosis of relapsing fever? The laws of relapsing fever, relating to the primary

paroxysm, the intermission and the relapse, are so distinctive that there can hardly be room for doubt concerning the diagnosis after the disease has ended. There is difficulty in discriminating it from other essential fevers chiefly in the primary paroxysm. The differential points in this stage I have already presented in connection with the case introduced in the early part of this lecture. I shall content myself with a recapitulation of these points.

The diagnosis involves certain distinctive characters which belong to the primary paroxysm; but it is to be based more especially, on negative points; in other words, on reasoning by way of exclusion. The distinctive characters are the abruptness of the invasion, the rapid increment of fever, the frequent occurrence of moisture on the skin, or perspiration more or less abundant, without any marked abatement of the fever, the prominence of muscular and arthritic pains, and, in certain cases, the occurrence of jaundice. These are the positive points which are diagnostic of relapsing fever. The fevers to be excluded are the eruptive fevers, febricula, remittent fever, typhus and typhoid fever. Scarlet fever and measles are readily excluded by the absence of the eruption and of the characters which are distinctive of these fevers during the period of invasion. Small-pox is excluded after the third day by the continuance of fever and the absence of the eruption. It is not always practicable to decide at once that the disease is not a febricula; but the intensity of the fever and the notable muscular pains do not belong to the latter. Doubt, however, is soon removed by the persistence of the fever. Typhoid fever is excluded by the absence of a prolonged access, and the absence of the abdominal symptoms, before sufficient time has elapsed for the appearance of the eruption, and of the characteristic mental condition. Typhus is excluded by the absence of the eruption, which appears earlier than in typhoid fever, by the absence of the dusky complexion, and by the absence of the mental condition—the latter also being apparent earlier than in typhoid fever. Remittent fever is excluded by the absence of remissions, these being determinable by a notable diminution of the axillary temperature in some cases in which they are not distinctly denoted by the pulse. Of course, the prevalence of relapsing fever is taken into account in arriving at the diagnosis.

What is the existing state of our knowledge as regards the causation of relapsing fever? Is relapsing fever communicable from the sick to the well? Undoubtedly this question is to be answered affirmatively. This opinion rests on facts derived from the different sources of evidence, exclusive of inoculation, which establish the contagiousness of other diseases; for example, typhus fever. Of those who are attacked during the prevalence of the disease, a large proportion are known to have been brought into

contact with, or close proximity to, patients affected with it. The disease is diffused in hospitals among fellow-patients and those who have charge of the sick. During the period in which cases were received in Bellevue Hospital, after the disease began to prevail recently in this city, namely, between November 14, 1869, and February 6, 1870, twelve persons contracted the fever in the hospital. These twelve persons were especially brought into contact with patients affected with the disease, and in no instance did it attack one who had not been thus exposed. One of the senior assistant physicians residing in the hospital has had it. The orderly in one of my wards contracted it; and his wife, who came to nurse him, was attacked by it. The disease has often been diffused in localities in which it did not previously exist, after the importation of a case.

Facts, however, go to show that it is not a highly-contagious disease. Considerable exposure appears, in general, to be necessary. The area of the infecting distance appears to be limited, and it remains to be ascertained whether it may be transported by fomites. Some facts, cited by Murchison, render it probable that it may be diffused in the latter mode. It is especially communicable when the miasm is derived from a number of patients in the wards of hospital, or in close apartments. The disease is not likely to be contracted from single patients in well-ventilated rooms. The investigations of the Metropolitan Board of Health in this city, during the present prevalence of the disease, have shown that it is diffused chiefly among those living in overcrowded, illy-ventilated tenement houses. Of the propriety and importance of removing these patients to hospitals or wards devoted specially to cases of this disease, there can be no doubt.

Destitution, deprivations, and especially deficient alimentation, are powerful predisposing causes. Of this fact, the past history of the disease, at different times and places, furnishes abundant evidence. The significance of the names "famine fever" and "hunger pest" relates to this fact. It is a question whether the special poison may not be generated by the want of food and other sanitary deficiencies, irrespective of its production as an infectious miasm. I am not prepared to offer an opinion respecting this question. It is to be remarked, however, that in typhoid fever we have an example of a fever which is undoubtedly, under certain circumstances, communicable, but which, it is probable, in the majority of cases, originates independently of contagion. For interesting and important details respecting the causation, I refer you especially to the treatise by Murchison.

Statistics do not show any notable etiological influence pertaining to age, sex, or season. As regards age and season, relapsing fever thus differs from typhoid fever.

The causation of relapsing fever is of importance with refer-

ence to the inquiry whether the disease is likely to prevail indefinitely in this city, and in other parts of our country. Although its diffusion involves generally, and perhaps always, a contagious principle, the history of the disease in other countries shows that it occurs as an epidemic, and, after continuing for a certain time, it disappears completely. Thus, in the city of London, for the fourteen years preceding the winter of 1868–'69, there had been no cases of the disease. The complete disappearance of the disease for so long a period goes to show the operation of predisposing and co-operating causes in conjunction with the special poison on which the production of the disease depends. In view of the past history of the disease, it is a fair conclusion that it will not become a permanent visitor on this side of the Atlantic. It will prevail in this city as long as auxiliary causes favor its diffusion. It will be likely to be carried to other places, especially to large towns where a considerable portion of the population are living under circumstances favorable to its occurrence; but it may be expected to disappear not long after it ceases to prevail as an epidemic. The effective means for arresting the spread of the disease are, thinning the population of overcrowded tenement-houses, dispersing the occupants of insalubrious dwellings, relieving destitution, especially as regards food, and promptly removing patients to hospitals devoted to cases of relapsing fever.

The prognosis in relapsing fever. It is, at first view, remarkable that a fever of such intensity, and prevailing especially among a class of persons whose powers of tolerance are impaired by previous hardships and want, should have such a small rate of mortality. The mortality, in different collections of cases, varies from two to four per cent. Dr. Moore, in his statistical report, states that, of one hundred and three cases admitted into Bellevue Hospital between November 14, 1869, and February 6, 1870, only two proved fatal.* What is the explanation of this low rate of mortality? An explanation, which perhaps is sufficient to account for the fact, has been already given, namely, the disease is very rarely accompanied by any serious complications. The comparatively much greater fatality of typhus and typhoid fever is due mainly to complications. These fevers rarely kill *per se*, that is, death is not purely an effect of the intensity of the disease.

Of the fatal cases of relapsing fever, the death, in a certain proportion, is attributable either to complications, such as pneumonia and dysentery, or to antecedent affections, for example, disease of the kidneys. But this fever may destroy life, irrespective of any important complications or antecedent affection. Several observers have reported cases in which sudden death occurred appar-

* *Vide* Dr. Moore's report appended to this lecture.

ently from syncope. One of the fatal cases in this hospital apparently exemplified this fact. The death was sudden and unexpected during the night, on the seventh day of the disease. At the time of death, the primary paroxysm seemed about to end, free perspiration having taken place. Neither coma nor convulsions occurred, and, as far as information could be obtained, the dying was by syncope. The autopsy revealed no important lesions except that the kidneys appeared to be fatty.

Suppression of urine followed by uræmic coma and convulsions is sometimes a cause of death. This fact was exemplified by one of the two fatal cases occurring in this hospital. It remains to be determined whether the suppression of urine may result from simply functional inactivity of the kidneys, or whether in all cases disease of these organs exists, as either as intercurrent, or an antecedent affection.

What are the indications for the treatment of relapsing fever? There are no known means which can be relied upon for cutting short a relapsing fever. With our present knowledge, there are no remedies which, employed in the intermission, will prevent the relapse. Quinia has been used freely in this stage recently at this hospital, but with no success. Its inutility, as a prophylactic, has been abundantly shown by different observers. Reasoning by analogy, I am led to think that the mineral acids may exert somewhat of that modifying influence, in this disease, which is so manifest in typhus and typhoid fever. They have been, to some extent, used in the cases recently treated here, but not sufficiently to warrant any conclusions based on experience. They certainly deserve to be tried. The treatment, with our present knowledge, must be expectant, meaning by this term, that it is to consist of palliative measures, and those addressed to the particular indications in individual cases.

The intensity of the fever during the paroxysms may be lessened by sponging the body with water, and perhaps by the wet sheet. Cold water may be taken into the stomach freely. Ice-cold carbonic-acid water is an acceptable and useful drink to allay thirst. Cephalalgia may be relieved by cold applications to the head. The bowels should be kept open by saline laxatives. The muscular and arthritic pains call for the use of opium, especially if it produce no unpleasant after-effects. Irrespective of the pains, opiates are indicated to relieve sleeplessness.

The dietetic treatment is important, more especially in the cases in which deficient alimentation has been a predisposing cause of the disease. In this fever, as in other fevers, when alimentary support is indicated, milk is the form of diet to be preferred. And it is to be borne in mind that in this, as in most diseases, there is never any danger of the over-appropriation of nutriment; the only risk is in the ingestion of more food than can be digested.

It is desirable that, during the paroxysms, from one to two quarts of milk should be taken daily. In the intermission, when the appetite returns, as much substantial food as can be digested should be allowed; and the more food is appropriated in this stage, the better is the patient enabled to tolerate the relapse. Tonic remedies are indicated throughout the disease, and especially in the intermission. Quinia in small doses, and some preparation of iron, are the tonics to be preferred.

If the symptoms denote asthenia, alcoholic stimulants are indicated. The occasional occurrence of death from syncope renders it important to watch carefully for this indication. When there is any room for supposing that alcoholic stimulants may be useful, they should be given tentatively and continued, or not, according to the effect, especially on the pulse and temperature. They are, of course, urgently indicated if the symptoms denote danger in the direction of asthenia.

Attention to the urine is important. It is to be recollected that a cause of death is suppression of urine. If the urinary excretion be deficient in quantity, or, if the quantity being sufficient, there be a deficiency of urea, diuretics are indicated. Should the kidneys not respond to diuretics, hydragogue laxatives or cathartics are indicated, with a view to eliminate urea through the alimentary canal. Active hydragogues are, of course, indicated, if uræmic coma or convulsions should supervene.

It is stated that convalescence from relapsing fever is notably slow, patients remaining for a long time much enfeebled, and tolerating with difficulty affections which may occur before the recovery is complete. This has not been a marked peculiarity in the cases which have come under my observation. It is doubtless more likely to be marked in the cases in which there had been impairment of the vital powers from innutrition and hardships before the fever was contracted; and also, it is more likely to be marked where abundant alimentation and the judicious use of stimulants have not entered into the treatment of the disease.—*New York Medical Journal, March*, 1870.

Editor's Book Table.

[NOTE.—All works reviewed in the columns of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. Keen and Cooke, whose catalogue of medical books will be sent to any address upon request.]

The Physiology of Man; Designed to Represent the Existing State of Physiological Science, as Applied to the Functions of the Human Body. By AUSTIN FLINT, JR., M.D., Professor of Physiology and Microscopy in the Bellevue Hospital Medical College, etc., etc. Secretion: Excretion; Ductless Glands; Nutrition; Animal Heat; Movements; Voice and Speech. New York: D. Appleton & Company, 90, 92, and 94 Grand Street. 1870. Pp. 526.

THIS is the third volume of a series commenced several years since by the younger Flint. The first volume, it will be recollected, discussed the Blood, Circulation and Respiration—the second, Alimentation, Digestion and Absorption. A concluding volume will be devoted to the functions of the nervous system, and the process of generation and development. Each volume, however, constitutes a separate and distinct treatise, being complete in itself.

The previous volumes have been well received by the profession, and the author is well known — beyond the necessity of an introduction. The present volume will enhance his reputation as a pains-taking, careful student and observer. Aside from numerous experiments in verification of the reports of others, he has instituted many original experiments, and, particularly with reference to the excretory function of the liver, has developed new facts of great interest.

A feature in the work is the effort "to draw as closely as possible, the line of distinction between secretions proper and excretions," and he believes the information in our possession is now of so positive a character, that we are able to subject the processes to definite generalization.

Personally, however, he indulges very little in attempts to generalize, an omission which may well be pardoned since he everywhere avoids any mere speculation or rhetoric. So great is his apparent dread of premature generalization that there is, if anything, a little too much grouping of facts, with too little effort to point out their essential relations. This is illustrated, partially, by the cavalier method in which he dismisses the doctrines of Dr. Beale, but more particularly by his discussion of the relation of the nervous system to the process of secretion. In his subsequent volume we hope to see this relation pointed out in a clearer and more philosophic manner. The limited and incorrect generalizations of Hall are scarely improved upon by admission of the still more restricted system of Dr. Campbell.

But we are in no mood to find fault with a work which, taken as a whole, is so thoroughly satisfactory, and which does honor to American medical literature.

Those who have the first two volumes will, of course, buy this, and those who have not should at once buy the three.

The publishers have brought out this volume in uniform with the preceding volumes, and in a style which reflects great credit upon them.

The Cell Doctrine; Its History and Present State. For the use of Students in Medicine and Dentistry. Also a Copious Bibliography of the Subject. By James Tyson, M.D., Lecturer on Microscopy in the University of Pennsylvania, etc., etc. With a Colored Plate and other Illustrations. Philadelphia: Lindsay & Blakiston. 1870. Pp. 150. $2.00.

This treatise is brought out in the same style with the London edition of Dr. Beale's essay on Protoplasm. It is perspicuously written, and gives concise statements of the views which have been entertained with reference to the vegetable and animal cell from first discovery to the present time. Especial attention is given to the doctrines of Schleiden and Schwann, Henle, Martin Barry, Prof. Goodsir, Huxley (1853), J. Hughes Bennett, Todd and Bowman, Virchow, Dujardin, Schultze, Beale, Robin and Huxley (1869).

The author adopts, with some modifications, the views of Dr. Beale. We thank him, on our own part, for the Bibliography he

has given us, which is alone worth to us more than the price of the book.

We advise all interested in Physiology to give this essay a careful reading.

Modern Therapeutics; A Compendium of Recent Formulæ and Specific Therapeutical Directions. By GEORGE H. NAPHEYS, A.M., M.D., Chief of Medical Clinic of Jefferson Medical College, etc., etc. Philadelphia: S. W. Butler, M.D., 115 South Seventh Street. 1870. Pp. 390.

SOMETHING like a couple of hundred professional celebrities are represented in this compend. What they say about particular methods in therapeutics, and their formularized notions are herein, more or less, set forth. The formulæ are arranged in classes under the general variety of affections for which they are presumed, by authority, to have been found useful. For the busy practitioner it will be found very convenient to have at hand something of this sort to suggest methods with which he has previously been unfamiliar. It seems hardly necessary, in this age, to caution against the tendency to depend upon routine treatment which books of the kind are likely to foster.

The contemporaneous use of a little good-natured skepticism will avoid this result, and meanwhile the book will be a good floater for those who cannot swim, and an occasional relief for those who can.

The delay in issue (see advertising pages of JOURNAL) has been well made up to buyers by the addition of a hundred extra pages without increase of the proposed price.

Health by Good Living. By W. W. HALL, M.D., Editor of Hall's Journal of Health, etc., etc. New York: Hurd & Houghton. Cambridge: Riverside Press. 1870. Pp. 277.

WRITTEN for popular perusal, it is one of the few books of the kind we can conscientiously recommend. To our professional brethren who are afraid of "a good square meal," we especially commend it. It is full of good sense and is professionally unexceptionable in tone.

Pamphlets.

Second Annual Report of the New York Orthopædic Infirmary. Located at 1299 Broadway.

Address before the St. Clair and Sanilac County (Michigan) Medical Society. By the retiring President, J. T. Travers, M.R.C.S.L.; with reports of committees, etc., etc.

In the same pamphlet we notice a highly interesting case, reported by our highly esteemed friend, Surgeon (U. S. A.) M. K. Taylor, of poisoning by the biniodide of mercury. Dr. T. points out the fact, that, unlike the bichloride, the biniodide forms no precipitate with albumen, which although recommended in the books as antidotal, is clearly not so, and from its preventing the action of other remedies should not be given. He is satisfied that in poisonous doses the biniodide is sedative and stupefying, and only the most prompt and efficient efforts will avail in saving life. He observes:

"So far as my means of judging indicate, the employment of liquor potassa, solutions of carb. potassa, extemporaneously prepared, lime-water followed immediately by bicarb. potassa; and the sulphide of ammonia, or potassa, the latter being the better, followed by emetics, or the stomach-pump, constitute our chief antidotes."

The very general use of this powerful agent as an antisyphilitic renders farther investigations of its best antidote desirable.

Historical Letter on the Introduction of Anæsthetics in Dentistry and Surgery in America, and on their First Employment in Midwifery in Great Britain. By Sir J. Y. Simpson, Bart., M.D., D.C.L., Professor, etc. Edinburgh.

A spicy reply to the elder Bigelow, of Boston (Massachusetts, U. S. A.). The eminent Scotchman, herein, shows that, for at least once, Boston is not entitled to *all* the honors.

Report of the Board of Managers, Superintendent and Treasurer of the Western Lunatic Asylum of Kentucky, for the year 1869.

Anniversary Oration Delivered before the Medical Society of the District of Columbia, by J. M. Toner, M.D.

This address gives a complete historical sketch of the Society from its organization to the present time. It also includes a history of the military hospitals during the war, museums, etc., etc. As is the case with all things undertaken by this most estimable professional gentleman, it is well done, and will form a permanent chapter in the medical history of the country.

Michigan University Medical Journal. March, 1870. Conducted by the Faculty of the Medical Department. R. A. Beal, Ann Arbor, Mich., publisher. $3.00 a year.

This is the initial number of a new medical monthly. It is neatly printed. Besides the editorial conduct of the Faculty, its issue is facilitated by a board of four "managing editors." If the publisher will now insist upon "payment invariably in advance," it will go far toward the achievement of success. The bane of medical journalism is the credit system, as the present writer is willing to make solemn affidavit. If the Michigan publisher don't believe this we offer him several thousand dollars of arrearages to this Journal before it adopted the cash system. They will be sold at an enormous sacrifice in view of the approaching resumption of specie payments.

On the Influence of Mental Activity on the Excretion of Phosphoric Acid by the Kidneys. Silliman Prize Thesis. By Luther Hodges Wood, Ph.B., M.D.

This paper recounts a series of experiments instituted for the purpose of confirming or refuting the propositions of Dr. T. R. Noyes (Am. Jour. Med. Sci., Oct., 1867) that the urine of the day is uniformly alkaline, and that of the night as uniformly acid. Dr. Noyes suggested, as accounting for this fact, that the causes of acidity were operating in both periods, and that the great increase of the alkaline phosphates in the daytime overbalanced the acid

reaction thus produced. The results given by Dr. Wood's experiments are tabulated, and also illustrated, by a series of nine diagrams.

The results are summed up as follows:

1. The *amount of urine* excreted varies at different periods of the day, even on a fixed diet; the day-urine exceeds the night-urine in the ratio of 3 to 2. The largest amount is excreted during the forenoon, the next largest in the afternoon, then comes that of the latter part of the night, and lastly that passed in the early part of the night.

2. The *density* of the urine varies inversely as the amount of urine passed; the morning-urine having a higher specific gravity than that excreted at night.

3. The *total amount of solids* excreted is greater during the day than during the night by nearly 50 per cent.; thus showing that the density is not diminished in proportion to the amount of urine passed.

4. The *reaction* of the day-urine is uniformly alkaline, that of the night-urine acid; while, however, acid urine is excreted during both periods of the night, it is the morning-urine only that is alkaline, that of the afternoon being acid.

5. The total *phosphoric acid* excreted per hour on an ordinary diet, is largest during the day, rising highest after the principal meal; while on a fixed diet, the excretion is greatest at night, the maximum being reached dnring the first half of the night, the amount diminishing in the afternoon; it is less still at 7 A.M. and least at 1 P.M.

6. The *alkaline phosphates*, when an ordinary diet is taken, are greater by day than by night; on a fixed diet the reverse is true.

7. The *earthy phosphates*, on the other hand, are largest in amount during the day, both on ordinary and fixed diets.

8. The *total phosphoric acid* is very greatly affected by the amount and kind of food taken.

9. The *variations* in the amount of phosphoric acid, considered as a whole, are not sufficient to afford any indication of the previous mental condition.

10. The *alkaline phosphates* are only *slightly increased* on increasing the amount of mental labor.

11. The *earthy* are *diminished* under the same conditions, by an amount varying from 20 to 40 per cent.

12. *No such increase of phosphoric acid* as would be required by the theory of the disintegration of nervous tissue during action, was observed in these experiments.

13. The *alkalinity* of the day-urine is not due to the presence of alkaline phosphates in excess.

Relaxation of the Pelvic Symphyses during Pregnancy and Parturition. By FREDERICK G. SNELLING, M.D. Published by W. A. Townsend & Adams, New York.

PREMISING that this condition has been known and commented on since the time of Hippocrates, and yet the allusions to it in the systematic treatises are scant and rare, he continues;

"The affection appears to consist of a relaxation of the pelvic articulations, becoming apparent suddenly after parturition, or gradually during pregnancy; and permitting of a degree of mobility of the pelvic bones which effectually hinders locomotion, and gives rise to the most peculiar, distressing, and alarming sensations. It can, perhaps, be best illustrated by the following case by Dr. Duplain.

"The patient, Madame ——, was 26 years of age, of a lymphatic temperament, married four years, and the mother of three children. The last child was born about the middle of May, 1867, after a labor lasting twenty-two hours, and was a child of unusual size. After its birth she was almost constantly confined to the bed, from the difficulty, and indeed impossibility of walking, and a singular and distressing sensation, as if the abdominal viscera were about to fall through the pelvic outlet. She also had vague pains, increased on motion, in the hips, at the symphysis pubis, and in the loins. As for the other symptoms, her appetite was good, her sleep sound, pulse normal, bowels regular, and urinary secretions healthy. The vaginal touch disclosed no malposition, or other disturbance of the uterine system. On palpation, the abdomen was supple and lax. On examining the patient in a recumbent position, the lower limbs presented nothing abnormal; their sensibility was intact, and movement was free and painless. But immediately upon arising, the sensation complained of returned with much severity, walking was accomplished with difficulty, and she dragged one foot after the other, inclining herself to the right and left as the case might be. On compressing the pubic and sacro-iliac symphysis some pain was experienced.

"From the symptoms supervening upon delivery, the physician, M. Duplain (eliminating the possibilities of diseases of the spinal cord, of the pelvic viscera, lumbo-abdominal neuralgia, etc.,) judged it to arise from a relaxation of the pelvic symphyses, and the sequel justified the accuracy of the diagnosis.

"A bandage was placed about the pelvis and hips in such a manner as to compress and confine the articulations firmly. Walking immediately became easy: she could maintain an upright position, the pains disappeared, and at the end of two months, without any other treatment, the patient left off her bandage and found herself entirely cured.

"This may be regarded as a typical case of *uncomplicated* relaxation of the pelvic symphyses."

A number of other cases are given with cuts illustrative. Sup-

purative inflammation of the symphyses sometimes occurs, with exhausting discharge, rupture, caries, etc. For the diagnosis little instruction is needed, provided the physician remembers the possibilities of the case. The treatment involves that for the prevention or removal of inflammation and after its subsidence the wearing of a pelvic bandage for a lengthened period.

Profs. Fordyce Barker and Isaac E. Taylor, remarked, with reference to this paper, that it recalled attention to a subject of great importance. Each had seen several cases, and they endorse the use of the bandage, although Prof. Meigs thought it of little service.

It is clear from reading this paper that the supposed rarity of the lesion is not so great but that the subject demands the attention of practitioners.

Half-Yearly Compendium of Medical Science. Part V, January, 1870, Pp. 304, has just come to hand. From such examination as we have had time to give it, the present volume is an improvement on its predecessors, the editors — Drs. Butler, Brinton and Napheys — having devoted careful attention to the character of selections. $3 a year. Single numbers, $2. Nos. 1 to 4, inclusive, $5. Address — S. W. Butler, M.D., 115 South Seventh Street, Philadelphia.

Literary.

Mauprat. A Novel. By GEORGE SAND. Translated from the French by VIRGINIA VAUGHAN. Boston: Roberts Brothers. 1870.

THE publishers are doing the American public good service by introducing to its readers the works of a most remarkable woman; a woman whose name has been widely pronounced, but whose works have been read in this country to an extent vastly below their real merit.

A Day by the Fire; and other Papers hitherto uncollected. By LEIGH HUNT. "Matchless as a fireside companion."—*Elia.* Boston: Roberts Brothers. 1870. Poetic prose from one of our most genial writers.

Red as a Rose is She, is the quaint title of a novel which we have not had time to look over, but being published by the Appletons and sold by W. B. Keen & Cooke, is of course good.

Editorial.

Sale of Diplomas.

About all the space that can be spared has been given to this subject. The Philadelphia University, through its Dean, W. Paine, M.D., expressly denies having been engaged in the business, but states that it is evidently the work of other parties. All the agencies hail from Philadelphia, and we are told there is a "Columbian University" in that city, and also a University of America, or American University, which operates in the same stock.

Meanwhile we can mention two practitioners in this city who have received diplomas recently from Philadelphia by direct purchase, neither of which is from the Columbian or American. We can also mention an honorary degree sent to a person here, who is not in practice, with an intimation that an honorarium of $50 was expected therefor.

To one of the first two alluded to was sent a private letter, which, taken in connection with the rest of the transaction, to our mind proves that the writer is or was a party to the business of diploma selling, and the name signed is that of a Professor in a Philadelphia "University," neither "Columbian" nor "American."

We do not propose to figure as parties in a threatened libel suit, as did he of the *Reporter*, or else we should give the names of all concerned, and publish the letter. Diploma selling has grown into a business as well conducted as counterfeiting.

Cook County Hospital.

At the meeting of the Board of Supervisors of this county, a few days since, the authorities definitely stated that there was room for no more patients in the brick monstrosity below Eighteenth street, and propose to board out patients at "Providence Hospital," wherever that may be.

Is it not about time that some sense should find its way into the noddles of officials?

Let the old hospital be sold for a brewery, or packing-house,

and the money be applied to the purchase of *ample* grounds, well drained, and with a chance for the winds to purify the air above, and then put up cheap buildings, and plenty of them.

We repeat: Let us have no more Bastiles of Disease.

Medical Gossip.

Dr. Elsberg has devised a "pocket laryngoscope," which strikes us as excellent. It is beautifully simple, and must come into general use. He states, what we are prepared to indorse, that "every physician can learn with ten minutes' practice, to perform laryngoscopy in all ordinary cases." The instrument he recommends ought to be, and probably is, afforded at a figure very much below that asked for the cumbrous affairs now in use.——A foreign journal details a case of cancer cure by application of gastric juice produced by establishing a fistulous opening in the stomach of a dog. Time, about a month. Professor Schiff prefers for this purpose the pancreatic juice.——Compressed air is recommended as at once a sedative to circulation and respiration, and a tonic to the bronchial mucous membrane, in maladies of the respiratory passages. It is said to be an excitant of digestion also.——The Royal Danish Society of Science has offered among other prizes, one of $170 for the best essay on the movement of the air in a system of ventilation. It is open to the competition of all nations and nearly all tongues, but must be handed in before October next.——There were fifty-eight boiler explosions in England during 1869, by which eighty-six persons were killed and one hundred and twenty-six injured.——The Zircon light is to be used in the Pneumatic Tunnel under Broadway. A single light will illuminate an entire car with great brilliancy. Two small cylinders containing compressed oxygen and hydrogen are carried on each car, and from them proceed tubes causing the gases to impinge on a pencil of zircon one-quarter of an inch long and one-eighth of an inch in diameter. It burns without any readjustment, and a single pencil will last three months. This

plan of illumination is worth looking at by those in search of light.——We have found among the most efficient diuretics, increasing both the solid and fluid excretion, the mucilage prepared from sliced leaves of the common prickly pear (*Cactus opuntia*). This plant is indigenous as far north as the banks of the Hudson river, and is readily cultivated in this section. It is entirely unirritating, and by the use of half a tumblerful of the mucilage several times a day, we have repeatedly increased the amount of urine from below the normal standard to eighty or ninety ounces in the twenty-four hours. No noxious results have at any time been observed in the course of a hundred or more trials. From careful observations we find that the total amount of solid matter excreted is considerably increased, although not by any means to the extent of the fluid. The remedy has, at all events, the advantage of being cheap and abundant — a circumstance not to be overlooked in these days, when the druggists get all the patient's money, and the doctors little but promises to pay hereafter.——Hypodermic injections of ergotine ($\frac{1}{2}$ to 3 grs.) have been used by Langenbeck in treatment of aneurism, and Dr. Drasche has arrested hæmoptysis instantaneously by the same device.——Workers in copper are said to be exempt from epidemic cholera. Where is *Judaeus Apella?*——M. Jeannel states the addition of $\frac{1}{5000}$th part of tartaric acid renders syrup of iodide of iron clear when it has decomposed, and at the same time notably diminishes the inky taste.——In a case of tetanus from wound of the fingers, Mr. Maunder cut across the median, radial and ulnar nerves in the lower fourth of the arm, instead of amputating.——The hydrate of chloral is now being used by everybody as an anodyne and soporific. Doses from five grains to a drachm. We have used it freely in large doses in numerous cases, but regret that we cannot go into raptures over it. At present writing, we much prefer a good article of chloric ether prepared in the old way, and not merely dilute chloroform, as the manner of most druggists is. The difference is greater than that between alcohol, whisky and brandy.——Speaking of chloroform, the Pharmaceutical Association at Washington, D.C., prepare an *Elixir Chloroform* thus:

℞ Chloroform, tinct. opi., tinct. camph., sp. ammon. ar., aa ℥ iss;
Oil of cinnamon, - - - - - *m* xx;
Brandy (*sic*), - - - - - - ℥ ij;
M.S.—Half a fluid drachm, more or less.

——One part of amber in one and a half parts of sulphide of carbon, is said to make an excellent cement. Apply the liquid with a brush, and press the surfaces together. It dries almost immediately.——The bisulphite of soda and carbolic acid are recommended in the treatment of trichiniasis. Nobody yet reports the use of chloral herein.——Prof. Wood, in his monograph on the hemp plant of North America, concludes it an excellent substitute for the foreign article, being both cheaply prepared and active. He uses the male seedling plants from Kentucky, and proved his faith in it by dangerous experiments upon himself. The active principle is a soft greenish resin, and is sufficiently active in quarter and grain doses. —— Once more carbolic acid, ⅔ grain in 20 minims of water, administered hypodermically, is said to cure intermittent.——In aphthæ, stomatitis, ottorhœa, etc., "A Country Physician" recommends in the *Bulletin:*

℞	Acid gallic,	℈iss;
	Glycerin,	ʒj;
	Liq. iod. co.,	ʒss;
	Aq. dest.,	ʒj;

M.S.—Apply with a camel's-hair brush several times daily.

——M. Vassin attributes five distinct varieties of cutaneous eruption to the continued use of the bromide of potassium.——M. Simon, of Hamburg, points out the occurrence of cerebral hæmorrhage and softening, after inhalation of the mixed gases arising from the combustion of coal.——Our learned correspondent Z. C. McElroy, M.D., writes to Prof. Potter (*Buffalo Medical Journal*, February) an explanation of the *modus operandi* of organic poison from the stand-point of his views of the physical basis of life.——A compromise of the questions involved between the line and staff officers of the navy is anticipated. The surgical position will be improved; it can scarcely be made worse.

The Medical Department of the Howard University, D. C., (colored) held its commencement exercises March 3. This is the second year of the institution, and it numbers, in this department, some thirty students, white, mixed, black, and female. They have a substantial three-story brick building with French roof, occupied in common with the Freedman's hospital. The prop-

erty which the University now owns, free from debt, is worth $1,000,000. Which reminds us that Senator Sumner, in his recent onslaught upon the Medical Society of the District of Columbia, urging the repeal of its charter, etc., committed, as it appears, a grave mistake. The "offences" he charges upon that society were really the doings of an entirely distinct voluntary "Association," which is not a chartered body.

It is to be regretted that the Massachusetts Senator would not retract his words, when the matter was fully explained to him. The officers of the Medical Society, however, have fully ventilated the subject in the Washington press.

One Dr. Donkin, of the University of Durham, (Eng.,) claims to have been the first to employ the milk diet for the relief and cure of diabetes. He must be pretty well along in years then, for we personally know of its use for this purpose more than quarter of a century ago, and even then it was spoken of as an old practice.

Inhalation of the aethereal tincture of valerian is recommended in hysteria.

Many of the journals are "recurring to first principles," vindicating calomel and kindred mercurials. Several elaborate articles have recently appeared, claiming for this agent all the remedial powers claimed for it by the fathers. Thus we progress in circles. However, one hobby is about as good as another, and "often a great deal better."

The famous Milwaukee surgical feat, extirpation of a kidney, has recently been accomplished by Simon, at Heidelberg. It seems a country surgeon had performed ovariotomy on the patient, and had injured the right ureter, giving rise to a urinary fistula. After several unsuccessful attempts to cure the fistula, Simon cut in from the lumbar region, shelled the kidney out of its capsule, tied *en masse*, and cut it away. The patient was cured. Simon now proposes extirpation of the kidney for such diseases as echinococcus, abscess, hydronephrosis, and renal calculi. T. Spencer Wells, in commenting on this case, recommends treatment of renal cysts by tapping and drainage, and has advised

nephrotomy in some cases of renal calculi. The writer has at present under treatment an aggravated case of renal calculus, with frequent hæmaturia, colic and occasional pyelitis. What do our correspondents say as to our asking Professor Gunn to cut for it?

Brown Sequard claims to have demonstrated in the spinal cord a special set of motor nerves, distinct from the voluntary motor, —the former being more in the lateral columns, and the latter more in the anterior. He thinks in epilepsy, these special fibres are the ones especially involved, and not the voluntary motor fibres. This is in harmony, he says, with Dr. Charet's statement, that inflammation (sclerosis) of the lateral columns of the spinal cord is invariably accompanied by muscular spasms.

A severe influenza has been recently visiting London. "It usually begins quite suddenly with pain in the throat and ears, followed by shivering, *malaise*, constriction of the chest, sneezing and utter prostration. The temperature goes up to 102 degrees the first night, and there is some tendency to light-headedness. The *Medical Times and Gazette* says: "Bed, lemonade and beef tea, with an aperient pill and ammonia draught, the first day; next morning a five-grain dose of quinine, and half a pint of champagne at night, form the best way of dealing with this unpleasant visitor—*tuto, cito, et jucunde.*"

Dr. White reports to the Boston Society for Medical Improvement several cases of Lupus successfully treated by Galvano-caustic. Dr. Hodges eulogized the same treatment, and also commends it in nævus and hæmorrhoids.

We fear that our Boston friends, who discovered anæsthesia, do not mourn as they should over the death of the young lady to whom Sir James Y. Simpson recently administered chloroform.

Dr. Barclay (*Dublin Press*) thinks that two or three drops of chloroform taken three or four times a day, is an admirable solvent for biliary calculi.

Prof. Howe (*Eclectic Journal*,) reports successful treatment of *mania a potu* hypodermically. The remedies used were in these proportions: ℞. Water ℥ iv; morphia, gr. ij; atropia gr. j; M. S.—Inject, hypodermically, from thirty to sixty drops.

Dr. Ferrand (*Edinburgh Journal*) urges the possibility of securing the effects of iodide of potassium applied in the dry form externally. In one case he secured iodism by putting on his patient a shirt previously dipped in a solution containing two drachms of the iodide, and then dried. After three days this shirt was replaced by another prepared in the same way; but on the fourth day the iodic symptoms occurred.

The National Medical Society lately organized at Washington, "embraces all colors, sexes and sects in medicine," which he of the *Nashville Journal* ethnologically christens "Organic Mosaic."

Rhigolene is not explosive, but it should be kept in a cool place; or when it is wanted for local anæsthesia, it will be found to have evaporated.

The *Detroit Journal* says that chloral is most conveniently administered in the form of a mixture containing not over forty grains to the fluid ounce, in simple syrup, flavored with peppermint. As chloral is getting cheaper, of course every body will try it. Confidence, in medicine at least, is not a plant of slow growth, as was demonstrated the other day by a physician who said that all that was needed to cure a certain patient was to pass a bougie every day and take chloral. A week after, "our Moses" took from that patient's bladder stones enough to start in the business of street paving.

Prof. Wormley, of Sterling Medical College, has isolated and described *gelsemia*, the true, active alkaloid of gelsemium.

Dr. McGraw, of Detroit, recommends the use of Fl. Ext. Belladonna, in five-drop doses *ter die*, several days before expected labor. The belladonna, or stramonium suppositor is better. —— The *Medical Investigator* don't believe that *pulsatilla*, third trituration, will cause breech presentation, and consistently says: "The use of *pulsatilla* in mal-presentations, as a

substitute for turning, we shall choose to regard worse in the *breach* than in the observance." *We* think so.

The same journal reports Scarlatina still prevailing in Chicago. "*Calc. C.* is very frequently indicated. When the eruption is tardy in making its appearance, and cerebral symptoms are prominent, *Apis* has proved efficient. *Bell.*, strange to say, has not been often indicated." *We* are surprised, also, about *Bell.*

Has *capsicum annuum* any real "Homœopathicity to hooping cough?"

The "first attenuation" of Petroleum being recommended for sea-sickness, the *Medical Gazette* wants to know if it is on the principle that "*rock oil*" is an appropriate "similium" to still the rocking of the waves. Evidently the *Gazette* man "makes light" of the petroleum. "No levity."

Prof. Chisolm (*Baltimore Medical Journal*) discards dressings after the incision for *fistula in ano.* Immediately after cutting, he applies, with a camel's-hair brush, or sponge, the liquid persulphate of iron over the entire surface. If much hæmorrhage occurs, he introduces, for a few hours, a dossil of lint soaked in the solution. Nothing more is needed save ablutions for cleanliness, and the patient is not often compelled to keep in bed, or in the house.——In the olden time, *Tulpius* and others, believed anal fistula "very high, either to the Loins, or the *Vertebræ* of the Breast, or sometimes to the Shoulders; whose inaccessible *Caries* the tortuous windings of the *fistula* does hinder from being searched with a probe, which also hinders injections, designed to cleanse the Ulcer, and does exclude the Hand, which might take out the vititated bone. Which, nevertheless, not being timely taken away, the Patient dies before his time, and the *fistula*, deriving its original from a remote *Caries*, does obstinately resist the Physician's cure. Whose lips though you clip open and ampliate,(which yet is very good in cutaneous fistula's,) nevertheless you will lose your labour, and you can never come to the farthest end of these sinuous windings, from whence so many branches, and so frequent rivulets descend by muscles and tendons, which lie deep, that though a Probe be never so dextrously put into such a tortuous *fistula*, yet it can never reach or remove the *Caries*, that is the cause of a continual *fistula*."

Cerebro-Spinal Meningitis.

[Which of our correspondents will undertake to respond to this?—Ed.]

San Jacinto P.O., Houston Co., Minn., *Feb.* 20, 1870.

Messrs. Allen and Hay, M.D.—*Dear Sirs:* Permit me to suggest for your consideration the importance of enlightening the profession of medicine on the subject of that terrible disease, cerebro-spinal meningitis. I have seen five die with what I consider this complaint. Will you please to lay before the profession, *in extenso, all* that is known on the subject; causes, progress, lesions (post-mortem), diagnosis, prognosis and treatment. How distinguished from typhoid fever in the *beginning*. This is *most* important; then the steps taken, tell for or against all the way through. Respectfully, G. Jas. Sheldon, M.D.

American Medical Association.

Office of Permanent Secretary—Wm. B. Atkinson, M.D., 1400 Pine st., S.W. cor. Broad, Philadelphia.

The twenty-first annual session will be held in Washington, D.C., May 3, 1870, at 11 A.M. The following committees are expected to report:

On Cultivation of the Cinchona Tree—Dr. Lemuel J. Deal, Pennsylvania, chairman. On the Cryptogamic Origin of Disease, with special reference to Recent Microscopic Investigations on that subject—Dr. Edward Curtis, U.S A., chairman. On the Doctrine of Force, Physical and Vital—Dr. John Waters, Missouri, chairman. On Variola—Dr. Joseph Jones, Louisiana, chairman. On the Relative Advantages of Syme's and Pirogoff's mode of Amputating the Ankle—Dr. G. A. Otis, U.S.A., chairman. On a National Medical Schoo!—Dr. F. G. Smith, Pennsylvania, chairman. On Commissioners to aid in Trials involving Scientific Testimony—Dr. John Ordronaux, N.Y., chairman. On the Climatology and Epidemics of Maine, Dr. J. C. Weston; New Hampshire, Dr. P. A. Stackpole; Vermont, Dr. Henry Janes; Massachusetts, Dr. H. I. Bowditch; Rhode Island, Dr. C. W. Parsons; Connecticut, Dr. E. K. Hunt; New York, Dr. W. F. Thoms; New Jersey, Dr. Ezra M. Hunt; Pennsylvania, Dr. D. F. Condie; Maryland, Dr. O. S. Mahon; Georgia, Dr. Juriah Harriss; Missouri, Dr. Geo. Engleman; Alabama, Dr. R. F. Michel; Texas, Dr. T. J. Heard; Illinois, Dr. R. C. Hamil; Indiana, Dr. J. F. Hibberd; District of Columbia, Dr. T. Antisell; Iowa, Dr. J. C. Hughes; Michigan, Dr. Abm. Sager; Ohio, Dr. T. L Neal; California, Dr. F. W. Hatch; Tennessee, Dr. B. W. Avent; West Virginia, Dr. E. A. Hildreth; Minnesota, Dr. Samuel Willey; Virginia, Dr. W. O. Owen; Delaware, Dr. L. B. Bush; Arkansas, Dr. G. W. Lawrence; Mississippi, Dr. W. Compton; Louisiana, Dr. L. T. Pimm; Wisconsin, Dr. J. K. Bartlett; Kentucky, Dr. J. D. Jackson. On Veterinary Colleges—Dr. Thomas Antisell, D. C., chairman. On Medical Ethics—Dr. Lewis A. Sayre, N.Y., chairman. On American Medical Necrology—Dr. C. C. Cox, Maryland, chairman. To Memoralize State Medical Societies—Dr. N. S. Davis, Illinois, chairman. On Nomenclature of Diseases—Dr. F. G. Smith, Pennsylvania, chairman. On Medical Education—Dr. T. G. Richardson, Louisiana, chairman. On Medical Literature—Dr. J. J. Woodward, U.S.A., chairman. On Prize Essays—Dr. Grafton Tyler, D. C., chairman.

Voluntary communications will be presented by Dr. John Curwen, Pennsylvania, on the Proper Treatment of the Insane; Dr. Nathan Allen, Massachusetts, on the Physiological Laws of Human Increase.

Secretaries of all medical organizations are requested to forward lists of their delegates as soon as elected, to the Permanent Secretary.

Any respectable physician who may desire to attend, but cannot do so as a delegate, may be made a *member by invitation*, upon the recommendation of the Committee of Arrangements. W. B. Atkinson.

THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery, and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D., AND WALTER HAY, M.D.

VOL. XXVII. — MAY, 1870. — No. 5.

Original Communications.

ARTICLE I. — *Puerperal Fever in Cook County Hospital.*

The following is a report of a Committee appointed at the regular meeting of the Medical Board of the Hospital, January 31st, 1870, to investigate the causes and management of the recent epidemic of Puerperal Fever in this Hospital, which was read at the regular meeting of the Board, February 28th, 1870, and ordered published in the medical journals of this city, and furnished to the Chicago Medical Society.

T. D. FITCH, M. D., Sec'y Med. Board Cook Co. Hospital.

To the Medical Board of Cook County Hospital:

GENTLEMEN: The undersigned, appointed a committee at your last meeting to investigate the management of the lying-in wards of the Hospital during the prevalence of the late epidemic of Puerperal Fever, beg leave to report: That the resources of our art for the prevention, and in the presence of such epidemic manifestations, may be briefly stated as the following:

1st. Cleanliness of person, and clothing, and apartments of the

lying-in women; ventilation of the wards; disinfection and removal of any sources of putrid effluvia; avoidance of the results of overcrowding; a properly regulated temperature; and appropriate alimentation.

2nd. These means failing to prevent the occurrence of cases of the disease, in addition to them, it now becomes necessary to isolate the patients as promptly and completely as possible, to make the disinfection and ventilation, if possible, yet more thorough; and on failure of these means to arrest the disease among the parturient patients,

3d. It then becomes necessary to vacate the wards, and refuse admission to this class of patients, experience proving that the risk is too great to continue the occupancy.

4th. The disuse of the wards should be for such length of time and seconded by such renovation, cleansing and disinfection as experience proves most efficient in thoroughly removing any real or suspected sources of infection from the wards themselves, the walls, ceiling, floors, etc., and all they may contain of clothing, furniture, etc. The treatment of such cases as do occur, notwithstanding these precautions, is so well settled that it is unnecessary to refer to it in detail; suffice it to say, that the indications to be filled by sedatives, counter-irritants and opiates, and in toxæmic cases eliminants, with such special modifications as particular complications demand, finding their indications in sound pathology and therapeutics, is the practice of the most authoritative names in gynæcological science. In the light of these principles your committee has thoroughly investigated the facts in regard to the late epidemic prevalent in the Hospital, and find they have been fully and faithfully observed. That scrupulous cleanliness, thorough disinfection, isolation of the patients, so far as practicable, and vacation of the wards, were all effected at such times as were proper and necessary. That the whole house has been thoroughly whitewashed twice, and the lying-in wards three times, since these cases began to appear. That such disinfectants as chloride of lime, carbolic acid, spray of permanganate of potassa, and solution of chlorinated soda, have been freely and persistently used. That the methods of treatment put in practice, were such as have already been noted, and that in their results, the most favorable effects were witnessed, notwithstanding formidable obstacles, which we beg

leave to bring to your notice. It is well known by all familiar with the classes of lying-in patients to be found in a pauper hospital, that they are, from the first, in notoriously unfavorable conditions for a safe and normal termination of gestation. The immense majority being either the unfortunate victims of seduction, abandoned to hardship and exposure, depressed and debilitated by moral and physical causes, more or less intense and long continued, or women of abandoned and depraved habits of life, intemperate, and exhausted by venereal excesses and diseases, arriving at the hospital as a last resort, having failed of all other means of existence; while it is the exception and not the rule to meet with women in average favorable moral and physical conditions for the act of childbirth. Under these circumstances, if we add to the gravity of this dangerous disease these unfavorable conditions, we should naturally expect a very high mortality, even with the most skillful treatment, which your committee is happy to announce, in this instance, as being much less than could reasonably have been anticipated.

In effect, from August, 1869, to February, 1870, the period during which the epidemic influence has principally made itself felt, the number of cases of puerperal fever occurring was sixteen, of which ten recovered and six died; a lower death rate than can be shown, under like conditions, in any published report with which your committee is familiar.

And your committee would further and finally report, after careful investigations, that any representations of neglect or mismanagement of this department of the hospital, can owe their origin to only one of two circumstances, viz: ignorance of facts or their willful falsification.

All of which is respectfully submitted.

THOS. BEVAN, *Chairman.*
W. H. BYFORD.
EDWIN POWELL.

W. H. Byford,
J. W. Freer,
H. A. Johnson,
Thomas Bevan,
R. G. Bogue,
H. M. Lyman,
T. D. Fitch,
R. C. Hamill,
J. R. Gore,
Jos. P. Ross,
Edwin Powell,
Chas. G. Smith,
H. W. Jones,
Jas. S. Hildreth,

Board of Cook Co. Hospital.

ARTICLE II.— *Incised and Punctured Wounds of Joints*, by I. N. DANFORTH, M. D., Chicago.

The surgeon of to-day may well be pardoned if he marvels at the comparatively recent origin, and unaccountably slow growth, of "conservative surgery"— in the largest and best acceptation of the term. Through all the ages, nature has been lavish of her examples of her wondrous power to repair injured parts; to preserve mutilated members; and to give continued and permanent usefulness to organs apparently damaged beyond recovery. And yet, how slow have her disciples been to appreciate this fact, and especially to utilize it, and give it practical application.

We sometimes see most palpable and gratifying instances of this conservative power of nature, in the repair of wounds and injuries of joints; parts which, from the complexity of their mechanism, and the low vitality of some of the tissues which enter into their structure, we should expect would only with great difficulty, and with indifferent success, repair themselves, when severely injured. I have chanced to treat several cases of grave injuries of joints, which have recovered with unexpected rapidity and perfection — three of which I propose to place upon record.

CASE 1. Daisy C., a bright little girl of eight years, was, with inexcusably culpable carelessness, allowed to amuse herself by running in front of a mowing machine, while the machine was in operation. She suddenly tripped and fell, and her ankle was caught in the machine, and terribly lacerated. I saw the case about an hour afterward. The foot was dangling by the tendo achillis; both malleoli were hanging by shreds of skin, the astragalus was divided so as to deprive it of its upper half, and the tissues generally, in and about the joint, were, to adopt the inelegant but expressive and strictly truthful language of a by-stander, "badly chawed up." The wound might very properly have been called a *contused wound;* and still, the knives of the machine having just been sharpened, there was not very much bruising of the tissues. Bleeding had been arrested by grasping the leg firmly in the hand. A more unpromising case could hardly be imagined; but, the patient presenting every evidence of a sound and vigorous constitution, I determined to give nature a chance to save the foot, and run the risk of being obliged to perform a secondary amputa-

tion. All detached and damaged fragments of bone (including both malleoli and half of the astragalus) were carefully removed, many shreds of soft tissue were trimmed away, the arteries ligated, the wound brought together by sutures, the limb placed in a fracture box, and water dressing applied. The only remedies given were an occasional dose of morphia, and one drop of the tincture of aconite every three hours — the latter for several days without intermission. I do not relate the progress of the case in detail, because there is nothing to relate. After the third day, no unfavorable symptoms appeared; the wound healing kindly, and the general symptoms calling for no special care or treatment. Passive motion was commenced very gently and carefully in about three weeks. The result of this case was remarkable. The patient was dismissed after six weeks, with a very slight motion of the joint. A year thereafter I saw her again; she was then walking a mile to school and home again, six days in the week, without the least pain or difficulty, and with scarcely appreciable lameness, and she came bounding toward me with all the agility of childhood. I have recently learned (seven years since the accident) that the foot presents a slightly atrophied appearance, but that locomotion continues all but perfect. The points of interest with regard to this case are, that an injury of a large joint, so extensive and disorganizing, should heal almost entirely by the "first intention," and without suppuration; and that the tissues should so accommodate themselves to the new and novel demands made upon them, as to answer, to a great extent, the purposes of an articulation, in face of the fact that a large proportion of the articular surfaces were entirely and permanently destroyed.

Case 2. John H., a stout, athletic youth, aged 18, while indulging in the Yankee luxury of "whittling," plunged the blade of a large "jack-knife" into his knee joint to the depth of about one inch and a half. A copious discharge of synovia ensued, the joint became swollen, hot, and painful, and severe febrile symptoms came on. I saw the case about four hours after the accident. At this time the joint was very painful, and there was much constitutional irritation. There was no hemorrhage, but a continuous discharge of synovia from the wound, which was situated on the anterior and external aspect of the right knee. The incision, which was perhaps three-quarters of an inch in length, was carefully

closed with strips of muslin dipped in collodion, a liberal coating of collodion was applied over the muslin strips, and the limb kept cool by constant irrigation. The patient was ordered to bed, with strict injunctions to stay there, and, the bowels being confined, a "black dose" was administered — the evacuations to be received in a bed-pan, to obviate the necessity of moving the joint. On the following day, the constitutional symptoms were scarcely lessened, but the wound was much less painful. Opium and aconite were prescribed, with a purgative dose of sulphate of magnesia the next morning. From this time, the case progressed slowly but favorably, until about the eighth day, when scarcely a trace of febrile action remained. I now removed the dressings, and found the wound apparently well united throughout its entire length; but the collodion dressing was renewed, and left on for another week. Opium and aconite were given continuously, in ordinary doses, up to the twelfth day, when I relieved the patient at once of my doses and my attendance. The joint remained swollen, somewhat painful, tender and stiff, for several weeks after the patient's dismissal, but after three months had elapsed, was apparently as sound as ever. I should mention that Tincture of Iodine was applied every second day, for several weeks after the removal of the collodion dressing, and that the articulation was at the same time supported by a bandage.

Case 3. J. W., a strong laboring man, aged about 35, while "loading" hay, was wounded in the left knee joint by the "tine" of a pitch-fork in the hands of a companion who was "pitching on." The steel prong passed between the extremities of the bones forming the articulation, a little to the left of the patella, to the depth of about two inches. The patient continued his labor for an hour thereafter, although suffering very great pain. I saw the case on the evening of the same day, about six hours after the injury. At that time locomotion was still possible, though productive of great pain; and at every step a peculiar *churning* sound was heard — if carefully listened for — produced by the admixture of the air which had entered the joint, with the synovial fluid, now much increased in consequence of irritation. There was a copious discharge of glairy fluid, (synovia,) from the wound. I looked upon the case as a grave one, in regard to its possible results, and directed my treatment accordingly. A bandage was tightly

applied from the junction of the lower with the middle third of the thigh *downwards* to the wound, and another one from the same point on the leg *upwards* to the wound, with the intention of expelling the air from the joint by compression. The wound was now carefully closed with collodion and muslin strips, and cold water constantly applied by irrigation. The patient was sent to bed, an active saline cathartic administered, and the patient forbidden to rise under any circumstances. The further progress of the case presented nothing peculiar. It was simply that of a severe case of traumatic arthritis. For several days the joint was extensively swollen, hot and painful, and active constitutional symptoms were of course present. The collodion dressing was maintained, irrigation was persistently kept up, saline cathartics were administered as occasion required, and the pulse held under control by Fleming's Tincture of Aconite. Recovery was quite slow — presenting in that particular a very marked contrast with that of Case 1 — but in the end very satisfactory. Three months after the date of the injury, the joint was apparently sound, although its mobility was very slightly impeded. In six months, the recovery was quite as complete as is usually obtained after acute rheumatism of the knee joint — and perhaps about as rapid.

In the management and treatment of the foregoing cases, it is not claimed that any new discoveries were made, or any wonderful cures performed. They are related simply as cases somewhat out of the usual class occurring in the practice of an ordinary Practitioner; and as affording excellent illustrations of the power of nature to repair parts complicated in their structure and possessing a low degree of vitality.

ARTICLE III. — *A Case of Aneurism of the Orbit.* — By E. POWELL, M. D., Prof. of Military Surgery and Surgical Anatomy, in Rush Medical College.

N. J. K., 12 years of age, from the State of Iowa, consulted Dr. E. L. Holmes, Oct. 29, 1869, at the Chicago Charitable Eye and Ear Infirmary, for a peculiar pulsating tumor of the left orbit.

After making a careful examination of the case, Dr. Holmes

referred the patient to my care, with the following history: The patient had always been strong and in good health, and yet not quite so robust as his six brothers and sisters. There was no apparent cause of the disease, either accidental or hereditary. On the evening of August 30, 1869, he was seized with nausea and vomiting, which continued through the night and the following day. This attack could only be ascribed to the efforts required to lift a pail of water quite high, just before experiencing the nausea. About two o'clock, on the morning of September 1st, the patient was seized with an agonizing pain over the left eye. The next morning the parents observed a very great degree of exophthalmos. The globe was immovable and the cornea almost entirely uncovered. The patient suffered constant and intense pain over the eye, with fever, nausea and delirium, during three weeks. At the end of this time the lower lid began to be everted, its conjunctival membrane becoming enormously swollen and red; but the fever and nausea gradually subsided, the latter recurring for a short period every two days. The pain had been controled by the use of quite large doses of morphine. When the patient came to the Infirmary he was pale, emaciated and weak, without appetite, but with no pain, and with only a slight tendency to nausea. The pulse was 110 and very feeble. There was very great exophthalmos, with scarcely any motion of the upper lid or globe. The cornea was partially covered by the lid, and was less sensitive to the touch than normal. The lower lid was completely everted, its conjunctiva being very œdematous and red. The ocular conjunctiva was much congested but not œdematous.

The sound peculiar to aneurism was heard by the ear placed on any part of the head. The characteristic pulsation and thrill were also perceived on placing the finger on the globe, but especially just under the nasal portion of the brow. Compression of the left common carotid arrested this peculiar sound and pulsation.

The central portion of the left cheek was much swollen. On placing the finger in the mouth and grasping the cheek between it and the thumb, the same pulsation and thrill were perceived along the course of the enlarged facial artery.

The pupil was dilated and immovable; vision being reduced to about one-third of its normal distinctness, the field of vision was normal in extent. The ophthalmoscope revealed no pulsation

or appearances differing in the least from those of the opposite eye, in which vision was perfect.

In counsel with Profs. J. W. Freer and H. A. Johnson, the consulting surgeons of the Infirmary, it was decided that the ligation of the common carotid was indicated. The father of the patient, however, would not consent to this operation, and took his son home; but returned with him for an operation January 10th. The pain and nausea had wholly subsided; the appetite, strength and general appearance were excellent. Pulse 75, and strong. The local symptoms remained unchanged, except that the exophthalmos was perhaps slightly increased, and the lower part of the cornea had become somewhat opaque. The cornea was less sensitive to the touch than before. Dr. Holmes stated that no abnormal, intra-ocular appearances could be detected with the ophthalmoscope.

I determined at once to tie the common carotid, and subsequently, in case the aneurism should reappear, by means of hot irons and injections of a solution of lactate of iron, overcome the tumor, as in a similar case, treated successfully, and reported in the London *Lancet*, vol. 2, 1853, in which I had assisted the late Prof. D. Brainard.

The common carotid was ligated January 13th, just below the crossing of the Omo-hyoid. The patient being under the influence of ether, scarcely any blood was lost. The pulsation and thrill in the orbit and cheek ceased immediately. For the first two days the patient's condition seemed most favorable. On the morning of the 15th his mother found that the right arm and leg were totally paralyzed. It is impossible to state precisely when the paralysis occurred, although there were evidences of mental aberration the day before; an examination of his limbs was neglected. On the same day distinct rales were observed throughout the whole chest.

At eleven o'clock, on the morning of the 18th, there was an alarming hemorrhage from the wound in the neck. The patient being placed at once under the influence of ether, search was made for the origin of the hemorrhage. It could not, however, be discovered, although the wound was carefully opened. As no more blood escaped, the wound was re-closed. No further hemorrhage occurred. On the evening of the 19th, the pulsation and thrill re-appeared in the orbit, at first feebly, and then nearly as strong as in the beginning. There had always been a regular discharge

of urine. Evacuations of the bowels were obtained by enemata. Subsequent to the operation the patient had been bountifully supplied with the most nutritious forms of liquid diet. The symptoms of coma, the difficulty of breathing, and the frequency and feebleness of the pulse constantly increased to the day of his death, which occurred January 21st. No autopsy was permitted.

ARTICLE IV.—*Cerebro-Spinal Meningitis.* By THOS. C. MURPHY, M. D., Grand Valley, Ill.

In the April number of the *Journal* is an article calling your attention to the importance of Cerebro-Spinal Meningitis. The Doctor asks you to lay before your readers *all* that is known on the subject. I should say the single word *all* covers a large field. How to distinguish Meningitis from typhoid is another question. Cerebro-Spinal Meningitis should never be mistaken for typhoid fever. The suddenness of the attack, intense headache, absence of febrile movement in the beginning of the attack, headache increasing as the disease advances, and the occurrence of symptoms denoting inflammation of the meninges of the brain and spinal cords, should distinguish it from typhoid fever. In typhoid the attack is gradual; we have diarrhœa, meteorism, iliac tenderness, and the peculiar expression of the countenance, which, once seen, cannot be forgotten. In Meningitis we have tonic contraction of the muscles of the neck and back, rachialgia, convulsions, and delirium, occurring not infrequently. In typhoid fever the rise of temperature is gradual, and reaches 104 degrees Fahrenheit on the fourth day. In Meningitis the onset is abrupt, and the temperature ranges from 100 to 101 degrees Fahrenheit, and never reaches as high as in typhoid fever. Nausea and vomiting are prominent symptoms in Meningitis. The clinical history of the two differ widely.

CAUSES OF MENINGITIS.

During the late war, filth and crowd poisons seemed to be active agents in the production of this disease. Among the soldiers of the U. S. army, recruiting depots were more liable to attack than

were troops in the field; showing that filth and crowd poisons are active agents in producing Meningitis as well as typhoid fever. But the poison of the one cannot produce the other; they are two distinct poisons, and always will be.

PROGNOSIS.

Meningitis must be regarded as a grave disease. Of the number of persons attacked, the majority die; in fact, many cases are struck down at once, as in malignant scarlet fever. Such is the virulent nature of the poison that, at the onset, death steps in during the first few hours of the attack.

MORBID ANATOMY.

(From the Report of the Surgeon General, U. S. Army.)

"There were two classes of cases brought under the observation of this department. In the first, the autopsy disclosed grave anatomical lesion of the cerebro-spinal axis, accumulations of serum, sero-pus, pus or tough yellow lymph, especially in the ventricles about the base of the brain, and in the upper part of the spinal canal. In the second class of cases, no perceptible anatomical lesion in the cerebro-spinal axis was observable. These two groups of cases rest upon equally reliable evidence, and are not to be disposed of on the supposition that the latter represents merely an early stage of the disease. Since, it is to be remarked that both anatomical conditions appear to have been found indifferently, in protracted cases as well as those which prove suddenly fatal." It has been well said of this disease, it is easier to say what it is not than what it is.

TREATMENT.

There is no antidote known to the profession that will counteract the specific ætic poison, nor can it be expelled by elimination. The indications are to stay, if possible, the progress of the disorder, and sustain the vital powers. A hot bath, in which the patient is to remain a short time only, and to be immediately wrapped in blankets, often gives some relief. Hypodermic injections of Morphia are called for when the pain is intense. The bowels should be kept open by cathartics; nutritious food must be given, beef tea, milk, etc. It seems as if the medical dice box has been rattled in vain for a specific (so called) for this disease. One tries blisters

and Belladonna, another tries Potass Bromide. The last seems to be a remedy of some use in this disease, at least it should have a fair trial. Cold to the head is of great value. In cases where there is great depression of the nervous system, the tincture of cantharides is of great value from its stimulant effects, and in such cases it is indicated. (I believe, to Prof. Allen, of Rush Medical College, is due the credit of reviving the use of the tincture of cantharides.) When there are so many agents recommended, I think the physician should use his own judgment, and treat each case according to the indications, and not be crying out for a sign. No sign shall be given ye. As for bringing before the profession all that is known on the subject of Meningitis, one medical journal is too small, and it would not be just the thing. Your correspondent (G. I. S.) can find all he seeks for in some of the practical works on Medicine; say Aitken's, Flint's, Bennett's. Much valuable information can be had from good medical journals. From the above works, a moderate share of knowledge may be drawn, but — the words of the Queen to Solomon — the half has not yet been told, (or some one else said so.)

Why spend valuable time in trying to find out the name of a disease? You cannot treat a disease according to its name or location, but according to what's the matter. Treat according to the indication all the time. Study the clinical history of the two diseases. Make it a point to have a little clinic of your own. Let each case be your hospital. Think; observe.

ARTICLE V. — *Case of Dislocation of Humerus.* By T. A. MONTGOMERY, Medical Student; Mankato, Minn., March 3, 1870.

Mr. D. H. Tyner, ex-sheriff of Blue Earth county; aged 50; healthy. On Saturday, February 12th, while carrying wood up a flight of stairs, he fell backwards; striking his weight on his right hand and arm, which he had thrown behind him, to break his fall. On February 16th, four days after the receipt of the injury, he made his appearance at the office of my preceptor, Dr. W. W.

Clark; stating, as his reason for not coming before, that he did not think the injury serious. He said he had experienced numbness of the hand and arm, from the first; with inability to raise it, or bring it forward across the chest. On examination, the injured shoulder appeared somewhat higher than that of the opposite side. There seemed to be an unnatural prominence of the acromion, with a hollow under it, at the back of the joint; also an undue fullness in front.

The diagnosis was partial dislocation of the humerus, upwards and forwards; the head of the bone lying against the coracoid process.

An attempt was immediately made to reduce it, but, owing to the rigidity of the muscles about the joint, arising from the length of time that had elapsed since the receipt of the injury, it proved ineffectual. He was then allowed about half an hour's rest, when, with the assistance of four strong men, the effort was again renewed. The patient was placed on a low couch and the shoulder fixed by a jacktowel, under the axilla; the ends being placed in the hands of assistants. Another towel was fastened to the arm by means of a clove hitch. In this way extension was made and continued. The surgeon grasping the arm, directed the assistants, while making the extension to raise the elbow toward the face, and at the same time, using the forearm as a lever, rotated it. By persevering in this manner for some time, the reduction was finally accomplished.

I have failed to find but two instances of this dislocation, either in the text books, or in any journal of medical or surgical science.

The patient is now out, attending to his regular business, and is able to use the joint quite freely, although the tendon of the biceps is, undoubtedly, out of the groove.

Moral.—Beware of procrastination.

Article VI.—*Akephaloid Monster.* By N. B. Larsh, M.D., Nebraska City, Neb.

Accompanying this communication, I send you a photograph of an akephaloid monster, resembling in many respects the case

recently reported to your journal by Dr. E. R. Hutchins, of Philadelphia.*

Mrs. H., aet. 32, the mother of four children, all healthy and well developed, was confined at full time, January 16th, last. About four weeks previous to this date she was surprised by the sudden and copious discharge of a large quantity of water, and supposing that labor had commenced or was about to commence, sent for her physician. No further symptoms of labor occurred until the date above named. Dr. Congar, who was called to attend the case, recognized some abnormal deviation in the presenting part, and the labor being tedious, sent for me to assist him.

Before my arrival, however, the mother had given birth to a still-born fœtus, such as you see delineated in the photograph. There was nothing peculiar or unusual in the labor, except, perhaps, an unusually large quantity of liquor amnii. No decomposition had taken place. The fœtus was about the average weight, with limbs well formed.

The head, however, presented the most remarkable deformity. The face and anterior part of the cranium, looking upward, were placed upon the shoulders. The mastoid processes spreading out, were in coaptation with the spine of the scapula on both sides.

From about the fourth dorsal vertabræ there extended upwards a livid surface of denuded, or what appeared to be denuded, muscular fibre, which terminated in a large livid symmetrical tumor, projecting from the cranium. The spinous processes of the vertabræ above the fourth dorsal, were wholly wanting, as was also the bony wall of the cranium from whence the tumor projected.

The external ears projected forward and opened anteriorly, being mere folds of the skin, without the usual helices.

As no dissection of the fœtus was made, the anatomical description is necessarily imperfect.

* The general appearance of this monstrosity is so similar to Dr. Hutchins' case, (*Journal*, Dec. 1869, p. 704,) that the wood cut is thought unnecessary. —Ed.

Epistolary.

My Dear Professor: It is a rimy, juicy day abroad, the east wind bearing the chill of death on its wings, piercing one to the very marrow. We have the "blues" terribly, and as is our custom, fall back upon "Burton's Anatomy of Melancholy," or the "Sorrows and Trials of a Nice Young Man," published somewhere about the middle of the 15th century; old, 'tis true, but replete with much consoling philosophy.

It is with some regret we say, our time has been so occupied with the harrowing cares and duties of life, as to have made it impossible to fill out our "skeleton records" to a proper and suitable article for your valuable Journal. What with fighting duns,—cajoling the determined, and bullying the weak;—staving off executions; pursuing refractory debtors; and "greasing the ways" of those ill in body and mind, for their passage over the "Stygian waters," we have been kept in a perpetual ferment, and have not had that placidity of mind, nor evenness of temper, consistent with connected and coherent thought; so thus the busy hours have sped, sweeping rapidly down the echoing corridors of Time, with saddening, and, may we not hope chastening, influences.

Events, whether professional or otherwise, are constantly transpiring in the life of every one, which, if properly appreciated and interpreted in a true philosophical spirit, must inure to the advantage of society at large; so, for want of better material, we have concluded to give you a few sketches of our wanderings—Asmodeus that we are—since last grasping your brotherly hand.

You may not yet have forgotten the Tipperary man, who with rage in his heart, and whisky in his head, dived down a steep stairway one night, fracturing his skull, besides receiving other contusions, and minor injuries! The flow of blood continued from the external meatus of the right ear, (more or less) for the first week; pulse 55; coma, with stertorous breathing; retention of urine; and involuntary fœcal discharge; partial anesthesia, and palsy of left side; and irregular sluggish pupils—the left much dilated—for at least three weeks longer, and then a gradual lighting up of the ugly symptoms, followed by some febrile reaction, and noisy, night delirium. Well, under constant nursing, and some judicious

handling, he slowly recovered, and now seems possessed of a brighter intelligence than ever before. As he has not been of any account to his family for many years, it is questionable whether any good could accrue to them or society, by allowing him to live, unless, indeed, this severe shock to his cerebral mass may have churned up his dormant ideas to a fitter realization of the duties of life. We have heard of idiots and imbeciles dropping from the upper stories of houses, and losing several ounces of brain matter on the pavement below, thus rendering them more sensible and rational beings. And, *en parenthesis*, may we not say *amigo mio*, that a like process of smashing and extrusion would be of vast benefit to many of our acquaintances?

Again, we were taken by Dr. E. W. Edwards, not long since, to see a natural curiosity, a woman with that perverted condition of the nervous system, known as catalepsy—a religious enthusiasm, the prevailing element—who would not pass her water, and who would not, though she could, talk. Now, just observe this, a "bird who could sing, but wouldn't;" no persuasion of friends, no marital endearments, no entreaties of her physician, were of least avail; her tongue she would hold, and has done it to this very day. Wonderful freak of nature! and there she lay, or sat in her bed, those large melancholy eyes following our every movement, comprehending every expression, but not one word; reticent and determined as a female alone can be, when determined to balk her tormentors. Had she the physical strength, we should have suggested taking her to the museum, or exhibiting her to those windy creatures, with "luminous foreheads," the "Shrieking Sisterhood," as a model *she*, and totally exempt from that prevailing epidemic—the *cacoethes loquendi*—which being freely translated, means a "diarrhœa of speech." We also hinted to our wife to come down and take a look, but she indignantly refused our modest request, stating that she would talk, and liked to talk, and this was one of the prerogatives of her sex, and, bye the bye, this is as near as she ever got to women's rights, and we don't believe she will ever get nearer, if there is any virtue left in leather and sweet oil. Our patient is, however, recovering her health and strength, but still holds her peace; let her pass: and long may she wave—(*not* her tongue).

A few days ago we were requested to appear before one of the

courts, to testify, as an expert, in the case of the People *vs.* Mary Smith, who several months back, in a fit of the frolics, popped away three or more barrels of her revolver at her brother-in-law, thereby doing him severe bodily injury, and endangering his life. As the law does not allow even such frisky females as Mrs. Smith to play with edged tools, she was arraigned by the people, and the plea of insanity, or, to draw it milder, mental derangement from chronic ear disease, was offered in her defense. Drs. E. S. Holmes, and H. R. Smith, both extensively acquainted with aural diseases, were also called to give their opinions, and the former gentleman, on examination of the lady's ears, states the following:

"*Right Ear.*—Tympanal membrane, slightly concave; bright spot, scarcely visible; external meatus, dry; and eustachian tube pervious after two expirations. *Left Ear.*—Same condition, except bright spot more visible; eustachian tube also pervious after two expirations."

Here we have an enumeration of symptoms belonging to many diseases of the ear, but sufficiently significant to frame something of a diagnosis; the sequel of some acute affection, several years past, perpetuated in a chronic form, by a strumous diathesis, or or some other condition of depreciated vitality, attacking not only the external ear, but also the middle, and yet, as her hearing was well preserved, creating no very great pathological changes.

The Judge talked very learnedly upon ear affections, and especially upon the terrors of ear-ache—and after a little confabulation among the lawyers, the plea was allowed; the Judge gave his opinion *ex cathedra;* the doctors drew in their horns, (we were not on hand); and Mrs. Smith was again let loose, to try her hand and her pistol upon her brother-in-law, the next time with perhaps better success.

We desire to say here, that the opinion was a bad one, and no medical man with the light before him, could predicate such, even upon the doctrine of remote sympathies. We grant that ear-ache is a terrible infliction, and know that a woman, with any severe pain, is very apt to become hysterical, cataleptic, lunatic, or any other thing you may suggest, and to crack away with all kinds of implements at the monster man; for example, *vide* any maimed man, with abridged rights — not ourselves, be it understood — but we mildly reject the conclusions of the learned lawyers, of whom

we are none — *te Deum laudamus* — but retain our own from a knowledge of the disease, being doctors — *de profundis clamamus.*

We have lately been relieving the monotony of our lives by perusing the proceedings of the Chicago Medical Society, as published in the *Daily Times.* We have been favorably impressed with their debates; evincing great profundity of learning, extensive pathological research, and much public modesty of demeanor. We think they will compare with the learned meetings of the London and Parisian Societies, not that they generally take so extensive a range, but are very pithy and sententious. And now, while speaking of this Society, let me ask if they did not revise the last "tariff of prices"— a very necessary bill, to govern our charges for attendance upon the ill? We believe we are right, and acknowledge it a very laudable thing; but in our experience, and that not very long since, we discovered that the very framers of that bill, and those most persistent in recommending still higher fees, were the very physicians to under-bid, and would even go long distances for twenty-five or fifty cents, the more especially if they could oust a brother practitioner. And, *apropos* of this, have we not also a "Code of Ethics" under their jealous guardianship? but of what avail? Can there be shown a handful of men in our profession who care one copper for its generous rules, or who would observe a single principle of its laws, if by ignoring them, and injuring one another, they could make a point? No sir! it is the way of the Chicago world. But as we have not time or space to descant further upon this topic, we will leave it for some future communication, premising that we shall attack vigorously the hollowness of all such pretension; aye, even *ad deliquium animi.*

In one of our restless moods, the other night, we dropped into the Opera House to witness the performances of the Fox Pantomime Troupe, and it so forcibly recalled the younger days of our life,— alas, gone forever! — that, for a while, we were positively happy. The clown was excellent, and his gymnastics displayed so much ease, agility, and practiced skill, that each endeavor brought out rounds of applause. The Hungarian brothers, with their ballet dancers, came in every now and then, to fill up, and probably such very active and rapid movements were seldom witnessed. Their legs went through more contortions than a frog's,

under the stimulus of the magnetic fluid; quickness, strength, etc., were the characteristics, but little grace; and how they got through, with such wretched music, is more than we can determine. We suppose, after so exemplary an evening, we were allowed to "crook our elbow," once, at least, and should not be d—d for such a lapse from virtue. But, oh! you pious members of our profession, don't turn up your eyes to Heaven, and pray the gory God, like the Pharisee of old, that you are not one of us. We know you from long experience, and know how many a square drink you take — behind the door, and how many iniquities you commit under the cover of your sanctity. It is much better, if you *will* drink, to do it openly, as a man; to do it in moderation; to throw the word policy, the synonym of hypocrisy, to the winds, and use, not abuse, every blessing vouchsafed to man; at the same time, admitting it a matter of taste with some, and education with others, as our old fathers always taught us to eschew sly tricks, and never to invade forbidden pastures. Farewell, oh! Professor; we shall meet soon again. More anon. "VIATOR."

CHICAGO, April, 1870.

Original Translations.

ARTICLE I. — *The Influence of Electric Currents upon the Nervous System.* By MM. LEGROS and ONIMUS. From Robins' Journal de l'Anatomie et de la Physiologie normale et Pathologique.

EXPERIMENTS UPON PERIPHERAL NERVES—PRELIMINARY.— In reading the majority of authors who have investigated the influence of electricity upon the nervous system, one is struck with the great number of experiments which have been made upon this subject, as contradictions which exist not only between different experimenters, but frequently with the same experimenter. Perhaps no department of science comprises so many opposing facts.

This is readily explained, for the conditions of experimentation are very complicated; it is necessary, indeed, to take into consideration not only the force of currents but even their direction, as well as the functions of the nerve, its state of excitability, and its relations with the nervous centres. By treating each case separately and by citing only the facts which experiment has placed beyond doubt, we hope to be able to reduce all these facts to a few simple laws, which may be readily retained, and which should constantly guide the physician in his therapeutic application.

§ 1.—*The Influence of Continuous Currents upon Motor Nerves.*

We lay down at first, the following principles: When mixed nerves in communication with the spinal marrow are electrized, the contractions may be reflex; it therefore becomes necessary, in order to distinguish clearly that which is due to the direct influence of the motor nerve, to separate the nerve from the cord. It is useless to say that, on the contrary, the nerve should be united to the cord, when the influence of electricity upon the sensitive nerves is to be examined.

A.—*Direct, Centrifugal or Descending Current.*

When upon any nerve, the sciatic for example, the electrodes of a pole are placed in such a manner that the positive pole shall be placed above the negative, a contraction will be observed at the moment when the circuit is closed, and in certain cases, at the moment when the current ceases. During the whole time that the current circulates, there is no contraction unless there should be variations in its intensity.

If a very feeble current is employed, or if the frog is already exhausted, a contraction is obtained only at the moment of closing, and none at the opening of the current.

If the current be of medium intensity, or even if the current be quite weak and the frog very active, a contraction is obtained at the closing, and at the opening of the current. The contraction produced at the opening of the current is always weaker than that which occurs at its close.

B.—*Inverse, Centripetal or Ascending Currents.*

If an inverse or ascending current be caused to act upon a nerve, contraction occurs only at the opening of the current, when the current is weak. When the current is strong, contractions occcur, as in the case of the direct current, both at its opening and at the closing.

Upon measuring with the dynamometer the contractions resulting from the application of an electric current to a nerve, it will be perceived that the contraction excited by the introduction of a direct current into a nerve, is always perceptibly stronger than that excited under similar conditions by the inverse current. (Matteucci.)

By using, at first, a current weak enough to produce no sensible excitation, then by gradually augmenting its intensity, the phenomenon of contraction is first observed when the direct current begins to pass; the inverse current, in order to produce contractions, at the moment of its cessation, must be a little stronger. (Matteucci.)

The direct current, therefore, acts more energetically upon muscular contraction than the inverse. This law explains why, in the experiment of Mariane, in passing the current from one arm to another, the contraction is most energetic in the arm in contact with the negative pole. It is, in fact, in this limb that the current is direct.

The same reason explains the majority of the facts observed by M. Chauveau.

The physiologist has attempted to establish as a law, that the electric current acts only at its point of exit, that is to say, on the side of the negative pole. In this case, again, there should be nervous filaments traversed by the direct current, which fact evidently determines more energetic contractions in the muscles situated near the negative pole.

We may conclude from all these facts that the direct or descending current is that which acts most energetically upon the motor nerve.

§ 2.—*The Influence of Continuous Currents upon Sensitive Nerves.*

Excitation of sensitive nerves can have as its consequence only the phenomena of pain or of contractions by reflex action. In every

case, in order that sensitive nerves may function or determine an action resulting from their excitation, it is necessary that they should be united to the cord. They are, so to speak, in relation to the cord, what the motor nerves are in relation to the muscles; they transmit their excitation to the nervous cells of the cord in the same manner as the motor nerves transmit it to the muscles, and both call into action the elements in which they terminate, and of which they are the natural excitors.

A.—*Direct Current.*

The direct current acts very little upon sensitive nerves; in mixed nerves it excites especially, as we have just said above, contractions in the muscles which receive the branches of the motor nerve. In general, it determines very few of the phenomena of sensibility, at the moment of closing, but very often the contrary occurs at the moment of opening. We shall have to revert to this last action, when we study the currents of polarization from a physiological point of view. The inverse current determines phenomena of sensibility, and, in addition, muscular movements in the back and the upper limbs. At the moment of its application the animal frequently utters cries, and in the case of the frog, as also of the dog, and even in man, there is, in their relations to sensation and pain, a very great difference between the descending and the ascending current.

When the nerve is much exhausted, the inverse current determines but very little action in the sensitive nerve, but its excitability disappears much sooner than that of the motor nerve.

We have endeavored to isolate, completely, the influence of electricity upon the sensitive nerves of limbs. To this end one of us endeavored to utilize the properties of curare, which leaves, during a certain time at least, the sensitive nerves intact, and which does not paralyze the motor nerves of a limb, if by means of a ligature the arterial circulation, and, consequently, the passage of the poison into the tissues of the limb, be intercepted.

By interrupting the access of blood to the right leg in a frog killed by curare, we have thus, in all portions of the body, sensitive nerves capable of transmitting impressions, but there are no motor nerves intact except in the right leg. The contractions of the

muscles of this leg will be therefore purely reflex, if the nerves of the opposite leg, which rests completely immobile, be excited.

By applying a descending current to the sciatic nerve of the paralyzed leg, contractions occur in the healthy leg opposite, at the closing of the current, and none at the opening. An ascending current determined contractions at the opening of the current, and none at the closing. However, during the first moments of the experiment. the ascending current determined especially contractions in the healthy leg, at the moment of closing the current; but these contractions disappeared quite rapidly. Hence, we concluded that reflex contractions were determined by electric excitation of sensitive nerves at the moment of the closing of a descending, and at the moment of the opening of an ascending current. Subsequently, repeating the same experiments, we have discovered in the operative procedure, a condition important to be noticed, and which led us into error. We took every precaution to avoid derived currents. We wiped the nerve dry, placed it upon a perfectly dry piece of glass, separated completely from each other the two sciatic nerves, and consequently believed ourselves to be under conditions the most favorable to obtain contractions purely reflex. But, in spite of all these precautions, the greater portion of the results obtained was due to derived currents, as we perceived more recently. The two legs, instead of being completely separated, were united at their upper portion by the bones of the pelvis. This sufficed to enable the current to circulate from one electrized leg to the other, and to determine derived currents, which induced contractions. By effectually cutting the pelvis, and separating the two legs, these same contractions were no longer obtained, and it was sufficient to induce their reappearance, to extend a moist thread from one to the other.

We shall have to revert to the importance of derived currents; but we shall at once, in this paragraph, establish that we have been wrong in announcing that the descending current determined in nerves purely sensitive, contractions at its closing, and that the ascending current determined them at its opening. The contrary occurs, and the only reflex contractions which we obtain in this case, are those which occurred at the moment of the closing of the ascending current.

Upon nerves of sense, electric currents determine different effects,

according to the nature of the nerve; but the effects produced remain, frequently, during the whole time of the passage of the electricity. When we apply, upon the side of the head, a current of medium intensity, and in nervous persons, even a feeble current, there is experienced in the mouth, during all the time that the current circulates, a very decided metallic taste. Most persons compare this taste to that of iron, and often retain it several hours after electrization. It is difficult to explain the production of this special taste. Is it a peculiar influence upon the nerves of taste, or does it occasion in this case a slight chemical decomposition of the iron enclosed within certain elements of the organism?

Applied in the neighborhood of the acoustic nerve, voltaic currents give origin to phenomena of buzzing, especially in persons a little deaf; these buzzings are uniform during the whole time occupied by the passage of the current.

These phenomena are important, because they prove that continuous currents act upon sensitive nerves during the whole duration of their passage, and not alone at the closing and opening.

The optic nerve manifests the phenomena of phosphenes only at the moment of the application and of the cessation of the current.

The facts which we reported at the beginning of this paragraph, which are elsewhere confirmed by those which we shall examine in the following paragraph, enable us to establish the following law: *The inverse or ascending current is that which acts most energetically upon sensitive nerves.*

§ 3.—*The Influence of Continuous Currents upon Mixed Nerves.*

In a mixed nerve we should recognize the two preceding laws, for we operate, as it were, at the same time upon motor and sensitive nerves: it is thus that we obtain, at once, the contractions to which we have already referred, and phenomena of sensibility, evidences of pain, and reflex contractions in other muscles. The phenomena of sensibility take place especially at the cessation of the direct current and at the closing of the inverse current. By preparing a frog in the manner of Galvani, and by plunging each of its paws into a glass filled with ordinary water, in connection with one of the poles of the pile, the influence of the direction of

the currents upon muscular contractions may be very readily studied. In this experiment, in fact, one of the paws, that which is plunged into the glass in which is the positive pole, is traversed by an ascending, the other, on the contrary, by a descending current. In this case, as was recognized long since by Aldini, Marianini, Ritter and others, in the first moments contractions occur in the two legs at the moment of the closing and of the opening of the current. The contractions at the closing are always more energetic than those which occur at the opening.

When the current is very feeble, and especially when the nerve has lost a little of its excitability, contractions occur only at the closing in the leg traversed by the direct, and the opening in the leg traversed by the inverse current.

These contractions are due to the excitations of the nerves which unite the two legs; that is to say, the electric current acts upon the nervous function, and that the nerves do not serve simply as conductors. Indeed, when the same experiment is made upon a frog poisoned with curare, or in which the nerves have been crushed, these alternations are no longer obtained, and, except by the employment of a very strong current, and by moistening the nerves, no muscular contraction is perceptible. This experiment is likewise one of the most conclusive to demonstrate that the nerve-substance is a bad conductor of electricity; for in this case, its excitability being destroyed, it should act only as a conducting medium; if the nerve be replaced by any other tissue, or by a moistened thread of silk, much more energetic muscular contractions are obtained.

By placing a frog, prepared after the manner of Galvani, astride of two glasses into which are plunged the rheaphores of a pile, besides the alternations of contraction, already indicated, another phenomenon of great value may be observed, as follows: By prolonging the action of the current, all contraction in the limb traversed by the direct current will be seen to disappear, whilst the contraction becomes stronger in the limb traversed by the inverse current. The contraction, which, in the commencement, manifested itself at the closing in the limb in which the direct current circulated, is no longer induced even at the closing, and in the limb traversed by the inverse current, the contraction which occurred only at the opening of the current, is induced now, not only at the opening, but even at the closing.

Moreover, by acting directly upon the nerves with an electric current, or with a mechanical or chemical irritant, it is always demonstrated that the nerve which has been traversed by the direct current has lost its excitability, whilst the excitability of the nerve of the opposite leg, which was under the influence of an inverse current, has not only been preserved, but has been perceptibly augmented.

Hence, *the excitability of nerves is diminished by a direct or descending, and increased by an inverse or ascending current.* As a consequence of this law, we have, moreover, the following proposition, which is further confirmed by experiment: *A nerve fatigued by the descending, regains its excitability by the ascending current, and a nerve whose excitability has been augmented by the ascending, loses it by the descending current*, (Volta, Lehot, Marianini.) In the case of very vigorous frogs, which have been subjected during a certain length of time to the passage of the current, it often happens that the contractions awakened in the inverse limb by the opening of the circuit, is not an instantaneous phenomenon, but a tetanic condition which persists during several seconds, (Ritter.) It is sufficient in this case, in order to arrest the tetanic contractions, to re-establish the primitive current.

The cause of the augmentation of the excitability of nerves, under the influence of the ascending current, depends at the same time upon the nerve and the cord.

In the frog prepared after the manner of Galvani, the nerves of the lower limbs remain attached to the cord, and the excitability of the nerve on the side of the limb traversed by the ascending current may then depend upon the influence of the spinal center. This influence is real, as we have been able to demonstrate. By destroying the cord completely by means of a stylet, and by sending through it, under these conditions, a current from one limb to the other, there was still observed a greater excitability in the nerve traversed by the inverse than in that traversed by the direct current, but its excitability is much less augmented than in the case in which the cord is intact.

The influence of the cord acts, then, to increase the excitability of peripheral nerves traversed by an inverse current: but this augmentation is equally due to the direct action of the electrical currents upon the nerves. Matteucci has made the following experi-

ments: In a frog which exhibited clearly the tetanic condition in the inverse limb at the opening of the circuit, after having left the circuit closed during a certain time, he cut the nerve, either near the spinal cord, or, on the contrary, at the point where it enters into the muscle of the thigh. In the first case, the interruption of the circuit thus produced excited, as usual, tetanic contraction, whilst nothing happened when the nerve had been entirely removed. This experiment proves that the presence of the nerve is necessary to produce this phenomenon, and, moreover, that the direct modification sustained by the nerve is the cause of this tetanic state.

Let us add this fact, which we have determined, and which is important in explanation of the phenomenon, as we shall see further, that when the nerve is cut between the two poles, no contraction, or at least no tetanic contraction, supervenes.

Foreign Correspondence.

PARIS, March 11, 1870.

In the service of Prof. Gosselin, at the Hospital of the Charity, has been, for the last six months, a man about 40 years of age, who had the whole of his right leg severely burned about two years ago; for which, at that time, he entered a hospital, and remained for six months. There being left a wound, about five inches long and one wide, which would not heal, he was then sent to Vincennes, where there is a hospital for men, convalescent, from all the hospitals of Paris. Having remained there a month or six weeks, and feeling strong, he resolved to leave the hospital and begin work. The little wound, still remaining open, now began to enlarge; and finally became so troublesome, that the patient sought aid from Prof. Gosselin. This celebrated surgeon, from the beginning of last October till the middle of March, tried everything possible to make the wound heal. He finally gave up in despair, telling the patient he must leave the hospital, as he could do nothing for him. One of the Internes of the service then proposed to try the autoplastic method, but in a new way.

This latter consists in taking, with a lancet, little pieces of the patient's skin, or of another person's, and putting them on to the wound, where they soon begin to granulate, and around them the skin begins to grow, forming, as it were, little islands of true skin in the midst of the wound. The pieces of skin taken are not larger than the heads of two or three pins taken together, and just thick enough to cause a little bleeding of the part from which they are taken. I examined this patient's leg this morning, and found that the large exposed surface is nearly covered with true skin; and in a very short time he will be completely well, and out of the service. The patient said he felt nothing in the wound. All goes perfectly well.

In doing this little operation, which is certainly much to be recommended, care must be taken that the cut surface of the skin be placed on the surface of the wound, and there maintained with a strip of diachylum till it has formed an union with the part. The ordinary dressing may be placed over the adhesive strip of plaster and rest of the wound.

The Interne, who appears to be the originator of this process, informed me that he had healed in this manner several wounds which had been considered hopeless. Prof. Gosselin has given him three or four patients in his private practice to treat, on whom he had been long uselessly trying to heal their wounds.

I saw, two days ago, Prof. Richet ordering the same treatment for one of these indefinite wounds, result of a burn. He, also, has been trying for months to make the wound heal, and at last gave it up. Being told of this new treatment, he resolved to try it.

It is almost needless to state, that before applying these little pieces of borrowed skin, the wound should first be brought into as healthy a condition as possible; that it would be useless to apply them while the suppuration is very profuse.

As I think of nothing new in the hospitals, allow me to continue with news from the Learned Societies of Paris. At one, M. Onimus presented three dogs, fed alike, and as similar as possible, before beginning his experiments. Two of the dogs were submitted to daily electrical shocks; the third not. The latter, after a short period, was neither so strong nor heavy as the two former; from which he concluded that electricity has a very favorable influence on development and nutrition, and declares the

ascending current to be more effective than the descending. These statements led M. Brown Sequard to remark that he had cited, in 1848, observations which proved that nutrition augments rapidly under the influence of galvanism. By-the-way, Dr. Brown Sequard has been obliged to discontinue his lectures at the Faculty on account of ill health. M. Onimus also said, at the same Medical Society, that, in regard to the two electrical currents, it had been observed, in a physiological point of view, that the continued current has on non-striated fibers a far more powerful action than the currents of induction; thus, the continued currents excite contractions of the non-striated fibers of the intestines, and of the bladder. This, he says, leads one to suppose that, by paralysis, the striated muscular element passed to the state of non-striated fibers. We see, from this, that the two kinds of currents have quite different properties. That, in a theoretical point of view, they may serve as a means of diagnosis, and as means of treatment.

The continued currents permit one to act on the nutrition of paralyzed muscles, especially in cases of facial paralysis, where the use of the currents of induction is quite reserved on account of their influence on the optic nerve. If on a paralyzed muscle no effect is obtained by the current of induction, but a contraction be produced by a continued current, we are to conclude that the nerve, in this case, is primarily affected. This is corroborated by physiological experiments.

Every time that the nerve is first affected in any pathological state, the continued currents have a decided effect. If we have to do with pure muscular atrophy, the currents of induction, on the contrary, should be employed.

The Academy of Medicine is now occupied with the utility and noxiousness of flies. Many interesting facts are brought forth. Among the many experimenters on this part of the animal kingdom, M. Davaine says that he has clearly proved that flies can inoculate the malignant pustule three days after having sucked the blood of an animal affected with this disease; that he is not yet prepared to declare that three days is the extreme limit.

Probably you are well aware that for a long time the Academy was occupied with the important question of the mortality of infants. It appears there are 53,000 annually born in Paris; that 25,000 of them are sent out to be nursed, and at the end of every

year 12,000 or 13,000 of these little Parisians are dead. This, you see, is an enormous per cent. of deaths; and as the Paris physicians are well aware that in Norway, and certain Departments of France, this same mortality is only ten per cent., it is well they should get a little excited over the question.

It also appears, from the report of the Commission, that there are an immense number of women in Paris who conceive, and bring forth children, yet are unable to suckle them on account of the lactiferous organs not being sufficiently active.

M. Piorry, in the discussion, said that, besides the bad alimentation, we must include change of air, and the journey these little ones are obliged to make at so early a moment. He says the infant should not be given to a nurse before the end of fifteen days, thus allowing the child to be more capable of digesting foreign milk, and of supporting the change of temperature, etc. He, moreover, thinks such a proceeding would tend to diminish the accidents of puerperality.

He demands that the peasant women, who are the great majority of the nurses in Paris, should be compelled to receive a certain amount of instruction in regard to their duties, their rights, morality, and hygiene. It is well known — I have seen it myself — that the great majority of Paris nurses are frightfully ignorant; knowing just enough to give their breast to the child, to wash, dress, and carry it about. French infancy is truly cradled — nursed in ignorance.

I find it not astonishing that so many of these little Parisians are born so soon to die, but that even the comparative few survive such an ocean of dangers. Well is it that the Academy have been so long occupied with this vital question; yet sad it is, too, that they have only revived the subject to send it back to the Commission, that a new report may be made. A certain lapse of time must thus pass, when it will be again brought up, for the Academy again to display its well-known oratory.

Two points worthy of notice in the report of the Commission are, that they recommend a change in the Military Institutions of France, and laws against seduction.

A. W. Bosworth.

Editor's Book Table.

[Note.—All works reviewed in the columns of the Chicago Medical Journal may be found in the extensive stock of W. B. Keen & Cooke, whose catalogue of medical books will be sent to any address upon request.]

A Practical Treatise on the Diseases of Children. By J. Forsyth Meigs, M. D., etc., etc., and William Pepper, M. D., etc., etc. Fourth edition (of Meigs on Diseases of Children). Revised and greatly enlarged. Philadelphia: Lindsay & Blakiston. 1870. Pp. 921. $6.00.

From the Publisher's notice we extract:

"Dr Meigs' work has been out of print for some years. The rapid sale of the three previous editions, and the great demand for a new edition, is sufficient evidence of its great popularity; while the very large practice of many years' standing of the author in the specialty of "Diseases of Children," imparts to it a value unequaled, probably, by any other work on the same subject now before the Profession. This present edition has been almost entirely rewritten and rearranged, and no effort or labor has been spared by either Drs. Meigs or Pepper, to make it represent fully in its most advanced state the present condition of Medicine as applied to Children's Diseases.

"The entire work has been subjected to careful revision. Several of the articles, as those on Eclampsia, Chorea, and Parasitic Skin Diseases, have been much enlarged; and others, as the various articles on the Diseases of the Stomach and Intestines, and that on Eczematous Affections, entirely rewritten. In addition, articles have been added upon the following important subjects:

Diseases of the Heart.	Facial Paralysis.
Cyanosis.	Rheumatism.
Diseases of the Cæcum and Appendix.	Diphtheria.
Intussusception.	Mumps.
Chronic Hydrocephalus.	Rickets.
Tetanus Nascentium.	Tuberculosis.
Atrophic Infantile Paralysis.	Infantile Syphilis.
Progressive Paralysis, with apparent Hypertrophy of the Muscles.	Typhoid Fever.
	Sclerema.

"The new matter thus added amounts to nearly 200 pages. It has been the effort of the authors, while endeavoring to make the work fully represent the state of our knowledge upon the subjects treated of, to retain its eminently practical character; and with this view, an unusually large amount of space has been devoted to the consideration of the treatment of each disease."

It will be seen from the above that the present is not a mere reprint of the previous work, or with more or less numerous additions. Those who have either of those editions need not be told that they are full of interesting matter; and we are pleased to see

that in this edition improvement is everywhere visible. It is, in fact, so nearly a new treatise, that the possession of any other edition should not prevent purchase of this. We could select chapters, or even take them at random, worth more to the practitioner than what is charged for the work as a whole. It may rank among the most complete of the systematic treatises on the subject. The index is copious, and a glance at it will show the great range of topics considered.

A Practical Guide to the Study of Diseases of the Eye; their Medical and Surgical Treatment. By HENRY W. WILLIAMS, A. M., M. D., Ophthalmic Surgeon to the City Hospital, Boston; etc., etc. Third Edition, Revised and Enlarged. Boston: Fields, Osgood & Co. Philadelphia: Lindsay & Blakiston. 1869. Pp. 422.

To the active practitioner, who has not time to wade through the diffuse descriptions, hair-splitting divisions, and innumerable technicalities which befog everybody except *the* specialists themselves, in the more elaborate treatises on Diseases of the Eye, Dr. Williams' book will prove a welcome relief. It is concise, yet clear and practical. The first chapter discusses the modes of examination of the eye; the second, the Ophthalmoscope; and the third, remedies and their application. Then follow twenty-one chapters on Special Diseases of the organ and its appendages. The Appendix, profusely illustrated, gives a resume of recent advances in Ophthalmic Science. There is a full index, and a number of leaves giving test types, similar to those of Prof. Snellen, of Utrecht.

Manual of Chemical Examination of the Urine in Disease; with brief Directions for the Examination of the most Common Varieties of Urinary Calculi. By AUSTIN FLINT, Jr., M. D., Professor of Physiology and Microscopy in the Bellevue Hospital Medical College, etc., etc. New York: D. Appleton & Company, 90, 92 and 94 Grand Street. 1870. Pp. 82.

The object of this Manual is to furnish facts in convenient shape for the physician, whilst engaged in such urinary examinations as are now daily required of him. The author informs us

that he commenced writing it merely to accompany a set of tests, etc., which Messrs. Tieman & Co., the eminent instrument makers, were arranging for the use of physicians, but it insensibly expanded to its present dimensions. It cannot be expected to take the place of the elaborate treatises, but is well adapted for the purpose set forth in the title page. A series of tables are given, which add much to its convenience and adaptation to use.

A Practical Treatise on the Diagnosis, Pathology and Treatment of Diseases of the Heart. By AUSTIN FLINT, M. D., Professor of the Principles and Practice of Medicine and of Clinical Medicine, in the Bellevue Hospital Medical College, etc. Second Edition; Thoroughly Revised and Enlarged. Philadelphia: Henry C. Lea. 1870. Pp. 550.

On the appearance of the first edition of this work, we cordially recommended it to the profession as "full, accurate and judicious." It is not too little to say, that "it stands at the head of all treatises on the subject." It is a standard text book in all the colleges, and is everywhere endorsed by the profession. The second edition has been carefully revised, many additions and alterations made, and much has been rewritten. The author states that the basis of the revision has been an analysis of about 450 cases recorded by him since the publication of the first edition. Without remembering any other of the valuable contributions of Prof. Flint to the literature of the profession, this book alone would rank him among its master minds and chief benefactors.

A Hand-Book of Operative Surgery. By JOHN H. PACKARD, M. D., One of the Surgeons of the Episcopal Hospital, Author of a Manual of Minor Surgery, etc., etc.; With 54 Steel Plates and Numerous Illustrations on Wood. Philadelphia: J. B. Lippincott & Co. 1870. Pp. 211.

It was the object of the author to illustrate, by at least one good method, every surgical operation in general use at the present day. In numerous instances, optional methods are given. It is strictly a manual of operations, no reference being made to diagnosis or treatment, except so far as they should influence the adoption or choice of operative measures. Directions and illustrations are

based on the experience of the author in hospital and private practice, together with observations on the operations of others, and further correctness assured by careful comparison with standard works. Every form of instrument required by the surgeon is described and shown by cuts. As a whole, the book fills a place previously unoccupied. A vast amount of information is concisely and perspicuously set forth in the text, and the steel engravings (by Illman & Son,) are excellently well adapted for their purpose. The book will be found very convenient even by those who have been in long practice, and are in possession of the larger systematic treatises. To the younger surgeons and students it is invaluable. We most heartily recommend it to our readers. It is just the thing to glance over at the emergency so often occurring to the surgeon.

The Preventive Obstacle, or Conjugal Onanism; the dangers and Inconveniences to the Individual, to the Family, and to Society, of Frauds in the Accomplishment of the Generative Function. By L. F. E. BERGERET, Physician-in-Chief of the Arbois Hospital (Jura); translated from the third French Edition, by P. DEMARMON, M.D., 1 vol. 12mo., cloth, $1.50. Mailed on receipt of price; TURNER & MIGNARD, publishers, 109 Nassau street, N. Y.

With regard to this book the publishers remark:

"This Work, which has reached a third edition within a year in France, treats of a subject hitherto neglected by medical writers; but of the highest importance, whether from a medical or from a social point of view. Not only every physician, but every one interested in social science, should read attentively the facts and conclusions set forth by the author as the results of an exceptionally wide experience."

Aside from a certain tendency to exaggeration, and the attributing to *frauds*, what in many of the cases cited is clearly attributable to excess and other causes, this monograph is certainly worthy of perusal, and may afford valuable suggestions to physicians. We should say, "It is of the French, Frenchy," if Dr. Storer's "*Why Not?*" and "*Is it I?*" did not remind us that these things are getting naturalized in Yankee land.

Pamphlets.

On the "Sedative" Action of Calomel in Disease. By Frederick D. Lente, M. D., Cold Spring, N. Y. Read before the Duchess Co. Medical Society, N. Y., Jan 12, 1870. Pp. 24.

This is an attempt to induce practitioners to seek the well-known "sedative" action of Calomel, when given in scruple and half-dram doses, or even *plus* this. The double-action, stimulant, (energizer of tissue metamorphosis,) and sedative, (diminisher of the same,) Calomel enjoys in common with a multitude of other remedial agents. It is an action that has been often sought with success, just as blood-letting, prostration by tartar emetic, and narcosis by opium have often proved successful, or at least have been followed by recovery from disease. Dr. Lente gives his experience in the use of Calomel, in sedative doses, in epidemic dysentery, membranous croup, cholera morbus, and refers to its similar use by others in Asiatic cholera, pneumonia occurring in a tuberculous patient, &c., &c. He says that he is as much opposed to its indiscriminate use as an alterative, that is, in minute doses, with a view to mercurialization, as almost any one can be — doubts its prophylactic power in primary syphilis, and thinks that, with the powerful modern remedies which enable us to promptly act on the nervous system, and control the action of the heart, Calomel, as an alterative at least, is unnecessary in all forms of fever, in most diseases of the liver and alimentary canal, and also in peritonitis, iritis, pericarditis, and allied affections. In his view, the abuse it has received from those who have employed it or vituperated it, should not prevent us from using it in certain diseases of a more than ordinarily dangerous character, where other agents are ordinarily futile. Dr. Lente is especially enthusiastic in his commendation of sedative doses of Calomel in membranous croup, and adduces several unmistakable cases which recovered after taking repeated doses, varying from twenty grains to a teaspoonful each. "In fact," he says, "it is well to bear in mind, when using the 'Calomel treatment,' that there is more danger in giving too little than too much, or, (to speak definitely,) in giving less than twenty

grains than a little over thirty." Half an ounce has been thus given, to a delicate child, in three or four days, and perfect recovery followed. "There does not appear to be such a thing as a *poisonous* dose of Calomel." The writer attributes its beneficial influence, principally, to reflex action — something, perhaps, due to its lessening the plasticity of the blood, and something to its relieving hyperaemia of the mucous membrane.

We do not imagine that the practical application of the teachings of this monograph will widely prevail, and therefore we omit the earnest protest which otherwise we should deem necessary.

Such a practice is based on the baldest empiricism, and the evidences of its success are, in a scientific sense, no more worthy of confidence than the countless "cures" which have, from time to time, been attributed to agents and methods of the most antipodal character. The newspapers are full of such things, and even the Homœopathists rely upon their medical multiplication table.

Proceedings of the Homœopathic Medical Society of Ohio. Fifth Annual Session. 1869.

Mineral Wealth of Missouri. I.—Mines and Mining Education. II.— Coal and Iron. By. Prof. C. D. Wilber, Inspector of Mining Lands. Fifth Thousand.

The Annals of Iowa. Published Quarterly by the State Historical Society at Iowa City. January, 1870. Edited by the Corresponding Secretary. $1.00 a year. Address F. Lloyd, Iowa City, Iowa.

Twelfth Annual Report of the Chicago Charitable Eye and Ear Infirmary. Presented by the Surgeons for the year 1869.

Eight hundred and seventy-three cases were treated at this institution during the year 1869 — making an aggregate of 5,355 since its first opening, in 1858. From the report we extract:

Consulting Surgeons — Prof. J. W. Freer, M. D.; Prof. H. A. Johnson, M. D. Attending Surgeons — Edward L. Holmes, M. D.; Edwin Powell, M. D.

This Institution is not an Asylum for the hopelessly blind or deaf, but an Infirmary for the treatment of the poor, suffering from curable diseases of the eye and ear.

Communities, therefore, should not be at the expense of sending cases,

which are not curable, to the Infirmary. The Trustees have no funds to appropriate for the traveling expenses of patients on their return home. They can, however, furnish clothing for a limited number of patients.

The State of Illinois in 1867, and again in 1869, appropriated $10,000 for the support of poor patients at the Infirmary. The Governor of Minnesota has at his disposal a small sum for patients of this class at the Infirmary, receiving treatment for diseases of the eye contracted during the late war. The Trustees have also a limited sum for the support of indigent sailors and soldiers.

As the funds of the Institution are insufficient for the constant maintenance of a large number of patients, it is hoped that communities in the State of Illinois, from which patients are sent for treatment, will each contribute a small sum of money to meet a part of the cost of their support while at the Infirmary. This will enable the largest possible number of poor to receive the benefits of the fund appropriated by the Legislature. Patients not residing in Illinois, must pay for their board during the whole period of their treatment.

Patients from Illinois are admitted for both gratuitous board and treatment, on furnishing written certificates of their indigent condition, either from their physicians or from a supervisor of the county or town where they reside.

Patients from Illinois (or other States when there are vacant rooms), are admitted for gratuitous treatment who bring similar certificates that they can pay for their board alone, but not for their treatment.

For the cost of the annual repairs of the Infirmary building, furniture, bedding, and other incidental expenses, the Institution is dependent upon funds raised by private contributions.

During the past year, an extension to the Infirmary building has been constructed, at considerable expense, to provide additional accommodations and comfort for the increasing number of patients. The Infirmary is more than ever in need of aid from the public.

Donations of money, fuel, furniture, and provisions, are, therefore, most earnestly solicited in aid of this charity.

The Infirmary is located at 16 East Pearson Street, first street north of Chicago Avenue, near the corner of North State Street, in a healthy portion of the city, near the lake, and is provided with all the conveniences necessary for the comfort and welfare of its patients.

The Dispensary of the Infirmary is open daily from 2 to 2½ P. M. for such poor patients, not boarding at the Infirmary, as may require treatment.

Intermarriage of Kindred. Consanguineous Marriages not Forbidden by Moral or Physiological Law. Evils of Connubial Alliances between Persons of Diverse Race. Annual Address before the Eclectic Medical Society of the State of New York, January, 1870. By ALEXANDER WILDER, M. D., President of the Society. Pp. 32.

On the Physical Basis of Life. By T. H. Huxley, LL. D., F. R. S. University Series No. 1. New Haven, Conn.: Charles C. Chatfield. 1870. Price, 25 cents.

This is the first of a series of Educational and Scientific Lectures, Addresses and Essays, now in process of publication, at the office of the College Courant, (Yale,) New Haven. No. 2 (in press) is on the Correlation of Vital and Physical Forces, by Prof. Geo. F. Barker, M. D., of Yale College. Price, 25 cents.

The author of the present lecture adopts Protoplasm as the physical basis of life, whether animal or vegetable. This material, so far as form is concerned, is entirely homologous in plants and animals, and in many cases it is a mere matter of convention whether we call a given organism an animal or a plant. The gist of Huxley's doctrine is in this sentence: "If the properties of water may be properly said to result from the nature and disposition of its component molecules, I can find no intelligible ground for refusing to say that the properties of protoplasm result from the nature and disposition of its molecules." Regarding the charge of materialism urged against his views, he argues with an ingenuity which will command attention:

"If we find that the ascertainment of the order of nature is facilitated by using one terminology, or one set of symbols, rather than another, it is our clear duty to use the former, and no harm can accrue so long as we bear in mind that we are dealing merely with terms and symbols. In itself it is of little moment whether we express the phenomena of matter in terms of spirit, or the phenomena of spirit in terms of matter; matter may be regarded as a form of thought, thought may be regarded as a property of matter — each statement has a certain relative truth. But with reference to the progress of science, the materialistic terminology is every way to be preferred."

But we have not space for the quotations which are suggested upon every page. Those who are thinking on these great questions should carefully peruse this production as a whole.

Non-Professional Exchanges.

Harper's Magazine, Harper's Weekly, Harper's Bazar.—Harper's Magazine is undoubtedly, as claimed, the best sustained work of the kind in the world. Apart from its illustrations, it contains from fifty to one hundred per cent. more matter than any similar periodical issued in the English language. It is peculiarly an evidence of the culture of the American people, not in the narrowed interpretation given to the word culture, in Boston, and exemplified in the very wet *Atlantic*, where minnows do much more abound than whales, but in the peculiar combination of "the racy monthly, the more philosophical quarterly, blended with the best feature of the daily journal." The *Weekly*—"A complete Pictorial History of the Times," and the *Bazar*, "A Repository of Fashion, Pleasure, and Instruction," are respectively the models which a host of publishers attempt to imitate, but none have yet equaled. Each of these periodicals is afforded, in consequence of their immense circulation, at the extraordinary low price of $4.00 per year; two of them at $7.00, or all of them for $10.00; address Harper & Brothers, New York.

Our publisher will furnish either or all of the Harper periodicals at club rates with the *Journal*.

College Courant.—Yale, New Haven, Connecticut. This is a weekly paper edited and published by Chas. C. Chatfield, A.M., assisted in the Scientific Department by Prof. G. F. Barker, M.D. It is a handsomely printed sixteen page quarto, and is afforded at $4.00 a year; single copies, ten cents. It is not merely, as the name might suggest, an organ or exponent of Yale College, but gives us the current news of collegiate life throughout the country. Condensed accounts of both literary and scientific progress, and elaborate papers from men of letters and distinction, render it a valuable means of intercommunication of thought and knowledge. On another page we have noticed a series of lectures now in progress of publication by the same publisher.

The American Builder, of this city, sustains admirably, the high reputation it has achieved in arts, architectural and general.

It is not only a paper for architects, but for all persons interested in building. Our friends who contemplate the erection of homes or their ornamentation or improvement, would get many valuable hints by subscribing for the *Builder*. But what calls for the present notice is the beautiful premium engraving, offered by the publisher to subscribers, for the present year. It is a splendid 24 by 32 inch fine line engraving on heavy plate paper, of Washington Irving. Drawing by Darley, engraving by Ritchie. It is really a magnificent work of Art. The plate is new and the picture cheap at thrice the price asked both for it and the *Builder*. Address, with $3.00, Charles D. Lakey, publisher, 113 and 115 Madison street, Chicago.

The Arts—Devoted to Science and Arts. April number, 1870, (Vol. 1, No. 2.) This is a new periodical, published monthly, in this city, by Jos. M. Hirsh & Co., Nos. 10 and 12 South Water street. Subscription price, $1.00 per year. From a glance at the table of contents, it will be seen that readers are invited to a pleasant *melange* of art and science. The present number contains a portrait and sketch of Thomas Graham, the eminent Scotch chemist. We wish *The Arts* success.

The European Mail.—A weekly summary of news for North America; usual contents:

"Accidents; Art and Science; Births; Marriages, and Deaths; Commercial Summary; Correspondence; Court; Criminal; Emigration; Foreign and Colonial; Gazette; General Summary; Imperial Parliament; Ireland; Latest Shipping; Legal; Literary; Market Reports; Medical; Mercantile; Military; Miscellaneous; Music and the Drama; Natural History; Naval; Obituary; Political; Prices Current; Scotland; Shipping and Freights; Special American Notes; Sporting; Stocks; and Shares; Wills and Bequests, etc., etc. Subscriptions, payable in advance, 17s. 4d. per annum, inclusive of postage. Address the Proprietors *European Mail*, Colonial Buildings, 44 A, Cannon Street, London, E. C. (Postage pre-paid.")

From several copies of this paper which we have received, we are enabled to recommend it to those taking interest in foreign affairs.

Editorial.

Ubique Gentium?

Mr. Leckey, the author of the masterly "History of European Morals"—a work which every thinking man should not only read but ponder well—a work which may rank among the highest productions of the cultured intellect, of the last quarter of a century, enunciates with regard to the medical profession these views, which are probably to be accepted as the deliberate sense of very many, if not of the majority, of the thinking men, the men of culture, (non-professional) of the present time.

"Of all the great branches of human knowledge, medicine is that in which the accomplished results are most obviously imperfect and provisional, in which the field of unrealized possibilities, is most extensive, and from which, if the human mind were directed to it, as it has been during the past century to inventions, and especially to overcoming space, the most splendid results might be expected. Our almost absolute ignorance of the causes of some of the most fatal diseases, and the empirical nature of nearly all our best medical treatment, have been often recognized. The medicine of inhalation is still in its infancy, and yet it is by inhalation that nature produces most of her diseases, and effects most of her cures. The medical powers of electricity, which of all known agencies bears most resemblance to life, are almost unexplored. The discovery of anæsthetics has in our own day opened out a field of inestimable importance, and the proved possibility, under certain conditions, of governing by external suggestions the whole current of the feelings and emotions, may possibly contribute yet further to the alleviation of suffering, and perhaps to that Euthanasia which Bacon proposed to physicians as the end of their art."

Mr. Leckey discusses then the relations between our physical and moral nature, and suggests that, with the complete information it is possible to acquire, we may treat the many varieties of moral disease as systematically as we now treat physical diseases.

Sir William Hamilton, another eminent thinker of the present time, curtly characterizes the history of medicine as a "History of Variations."

Medical scholars, themselves, in looking over our records, have not infrequently made use of indignant and almost despairing sentences—even harsh and coarse objurgations, at the fickleness of

opinion, the contradictory statements, the multiform hypotheses, the myriad "remedies," the acrimonious disputes, the vehement sarcasms and loud ridicule which have chased each other through all the bewildering mazes of professional history. Of course these hasty expressions, having little more to do with the argument than exclamation points in punctuation of a book, are greedily caught up by the advocates of exclusive and dogmatic "new systems of practice;" and even philosophical and cultivated minds are apt to attribute to them an importance and weight utterly beyond their real value. Montaigne, who had "the stone," and found no relief from the physicians of his age, railed at the whole fraternity, and every little essayist and popular lecture maker, since, has imitated this great master of the sixteenth century, forgetting that the world is three hundred years older. Montaigne recognized the mistakes into which the physician must almost of necessity fall.

"He has need of too many parts, considerations, and circumstances rightly to adjust his design; he must know the sick person's complection, his temperature, his humors, inclinations, actions, nay, his very thought and imaginations; he must be assured of the external circumstances, of the nature of the place, the quality of the air, and season, the situation of the planets, and their influences; he must know in the disease, the causes, prognostics, affections, and critical days; in the drugs, the weight, the power of working, the country, figure, age, and dispensation; and he must know how rightly to proportion and mix all these together, to beget a just and perfect symmetry; wherein if there be the least error, if amongst so many springs, there be but any one out of order, 'tis enough to destroy us. God knows of how great difficulty most of these things are to be understood."

But the trouble is not alone of what physicians should, but do not, know, for as old Thomas Browne wrote :

"For, what is worse, knowledge is made by oblivion; and to purchase a clear and warrantable body of Truth, we must forget and part with much we know." * * "Wise men cannot but know, that Arts and Learning want this expurgation; and if the course of truth bee permitted unto its selfe, like that of Time and uncorrected computations, it cannot escape many errors, which duration still enlargeth."

And these latter hit exactly the pith and marrow of the subject. So long as diseases were considered as entities, as devils to be cast out, and symptoms as the manifest strivings of these devils with

the possessed organ or body, just so long would continue the search for mysteriously operating agents, or charms, or as the later word to express the same idea is, specifics. Even Lord Bacon fell into this identical error, notwithstanding his usually clear insight of the methods of discovering truth, as is instanced in the often quoted sentence; complaining that physicians neglect efforts to discover particular remedies having a peculiar and especial relation to particular symptoms and diseases. Mr. Leckey, by his reference to inhalations, electricity and anæsthetics, in the passage quoted, evidently looks for the same thing, only he wants us to discover for him some specifics for moral diseases—some "Morrison's Pill" (as Carlyle has it) for disorders of the psychical part, both of individuals and the commonwealth. The thought was anticipated by Macbeth—which see, for there it is in Scene III, Act V.

Broussais characterized this idea in medicine as *Ontology*, and his explanation, half a century ago, shows now, as then, why much of medicine, so called, remains in darkness and uncertainty.

"The group of symptoms which are given as diseases, without referring them to the organs, on which they depend, or referring them to the organs without having well determined the nature of the physiological aberrations of these last, are metaphysical abstractions, which do not represent a constant, invariable morbid state, of which we can be sure of finding the model in nature; they are then factitious existences, and all who study medicine by this method, are *ontologists*.

"To consider these factitious morbid existences as injurious powers, which, act upon the organs, and modify them by producing such or such a disorder, is to mistake effects for causes; is ontology. To consider the succession of symptoms which have been observed, as the necessary and invariable progress of the disease, and to derive from them characters essential to their diagnosis, and consequently to their treatment, is to create a factitious being; since the affections of organs are different, according to the modifying powers which act upon them; it is placing ourselves in the impossibility of treating the disease before its termination, without contradicting our own principles. This is always ontology."

About everybody in these days will disclaim ontological views with regard to disease, but its nomenclature contaminates the books, and infests the language of professional life. The physician of highest culture brought face to face with a sick man, will, involuntarily, perhaps, nevertheless in fact, look upon the disease as a personality, to be dealt with as an enemy. The whole enginery of formularies reeks with it.

From a pamphlet before us, the valedictory address at Jefferson Medical College, March, 1870, by J. Aitkin Meigs, M.D., Prof., etc., we extract these sentences:

"To the reflecting mind it is evident that medicine is now passing through a chaotic phase in its own career. The day of blind obedience to authority is at an end. No asserted fact, no theory, however plausible, finds its way to acceptance on account of the great name attached to it, but on the contrary, it is immediately tried in the crucible of experiment, observation, and induction. But medicine, in becoming scientific, has grown sceptical. The twin brothers Doubt and Disbelief are even now pulling up, and with no gentle hand, the ancient landmarks all around us. The iconoclasts are at work. Opinions and conclusions are being sifted so fiercely that we at length stand face to face with the danger of denying altogether the accumulated experience of our fathers."

Language like this could not have been used without imperiling the professional *status* twenty years ago, but it is central truth, and the writer, in current phrase, strikes the hard-pan or bed rock, in speaking of the reconstruction of the philosophy of medicine and placing it upon a sure scientific basis.

"This basis, it is now beginning to be seen, is to be made up of the accumulated facts relating to the chemical circulation of matter, the conservation of energy, and the development of organic forms by natural selection."

We are moving on — falling into the line of the world's progress, by no pitiful discoveries of specifics, big or little; no dubious inhalations, electrical wonders or anæsthetic stupefaction, such as Mr. Leckey hints to be the guide-boards of advance.

We do not argue here, yet do not in anywise admit that medicine has lagged behind other sciences, whether of locomotion or other. Hygiene and philosophical prophylaxis did more to ensure success in the late war than even railroads or improved guns.

We are able to say positively, to malignant epidemics, which once swept away population by the millions: Thus far shalt thou go and no farther! Considering the nature of the subject, we are willing to be tested by similar methods to those which Mr. Lecky applies to the particulars of general progress.

We concede the defects both of our Science and Practice, but we proudly claim to belong to a profession whose advancement challenges the rivalry of any other under the sunlight.

Albany Medical College.

Dr. Thos. C. Durant of New York, a graduate of the College and an early student of Drs. March and Armsby, has given $15,000 to endow the "*March Professorship.*"

Drs. E. R. Peaslee, and Meredith Clymer, of New York, and Dr. Wm. P. Seymour, of Troy, have accepted Chairs in the Faculty of the College.

Medical Gossip.

The Archbishop of Armagh sent to Cecil, Queen Elizabeth's Prime Minister, in 1571, this remedy for his gout: "Take two spaniel whelps of two days old, scald them and cause the entrails to be taken out, but wash them not. Take five ounces of brimstone, four ounces of turpentine, five ounces of parmaceti, a handful of nettles, and a quantity of oil of balm, and put all the aforesaid in them, stamped, and sew them up and roast them, and take the drops and anoint you where the grief is, and, by God's grace, your Honor shall find help." (*Froude, Hist. Eng.*, C. XXIV.) The Archbishop was otherwise known as Dr. Lancaster. Indeed, in the olden time, the functions of priest and doctor were often exercised by the same person, which is the probable explanation why it happens that doctors, now-a-days, are usually of a polemical turn, and clergymen love, above all things, to dabble in physic. —— About this same period, (1569,) the English soldiers sent to Ireland suffered grievously from flux, and it is curious to read that it was attributed to the continued eating of fresh beef — the Irish nation at that time living almost wholly on meat, and using but little bread. This was before the introduction of the potato. Throughout history, it is noticeable that all diseases are referred each to some single specific cause. The idea of concurrent causes is as essentially modern as it is correct.—— When the spotted fever prevailed in Virginia, early in the '20's, Dr. Lucas, a practitioner, gave this treatment: (*Am. Med. Recorder*, Vol. V.) Evacuants very cautiously, always directing the patient to take a stiff drink of toddy after each stool. In many cases no sort of evacuation was premised or admissible. Patients took one or two ounces of Bark every one, two, or three hours, and from three to six pints of good rum in the 24 hours. Laudanum was given freely— many taking from eight to twelve drachms. Blood-letting, carried to the extent of producing an impression on the system, was almost uniformly fatal.

"Two stout, strong, athletic men took an emetic of tart. ant.; after puking moderately three times, they were prostrated to the lowest possible degree consistent with life. I found them without a pulse, in a profuse, cold, waxy sweat. The first took 60 drops of laud. in a wine-glass of strong rum, instanter; one ounce of eth. sulph., one of hartshorn, half a one of laud.; two ounces of bark and a pint of rum with 90 grains of camphor, were given him in about an hour; two ounces of bark, three of rum, one drachm of laud., and four of water, were directed to be administered every two hours by injection.

Large plasters of mustard were applied to the extremities, breast and spine, and equal parts of rum and a strong decoction of cyanne tea were given every half hour; this was continued for 48 hours, and in 72 hours he was free from danger. Boiling water was applied before the mustard, to ensure its effects. The other was treated in the same way, except boiling water; both are now well." A lady patient "took, every two hours, two ounces of bark, ten grs. of camphor, ten of vol. alkali, two scruples of laud., and three ounces of spirits, by injection, for 48 to 72 hours, and from 1 to 1½ pints of rum in the 24 hours." She recovered.

—— In the same article he remarks that, "in a similar epidemic prevailing in 1819, 25 to 40 grs. of tart. ant. were required to produce vomiting — cathartics in proportion — and it was about impossible to salivate with mercury. "During this season, Thos. E. Abernathy took, in eight days, nine drachms of calomel, with a proportionable quantity of oil, salts and jalap, without an emetic, cathartic, or sialagogue effect. He recovered on the free use of bark, toddy, and elixir vitriol, and I never could tell what became of the calomel, etc. He had the disease in the dysenteric form." This will do for the sedative action of calomel — see Dr. LENTE. RIVERIUS, quoted by Bonet in 1682, urges, in what was probably the same disease, "blood-letting"— which "the change of type," perhaps, prevented Dr. Lucas from using. *Sic:*

"It is determined, by the wise judgment of Doctors, that when purple spots appear, in the beginning of the disease, and at those days when bleeding uses to be celebrated, if a sufficient quantity of bloud have not been taken away before, even at that time bloud may be taken away in a moderate quantity without any imminent danger; seeing that Eruption, which is in the beginning of the disease, is not critical but symptomatick, arising from the exceeding ebullition of the bloud and the ferment of malignant and putrefying humours: and therefore Nature's motion, which at that time is not, cannot be hindred: for if, when the body is plethorick, and sends out a thick and red urine, you do not let bloud on the score of spots appearing, Nature will scarce be able to conquer so great a quantity of humours, and there will be danger lest they fall upon some inner part, and breed in it a pernicious inflammation."

He also recommends, particularly, opening the Hæmorrhoidal veins by applying leeches to them, which latter seems to us, also, the most appropriate part on which to apply them.—— Henry C. Lea, the eminent medical book publisher, is achieving high reputation as a literary author. His books are quoted in Europe as among the most learned and able which this country has given to the world.——Prof. Richards has been recently delighting popular audiences in various parts of the Northwest by a series of brilliantly illustrated lectures on chemistry. Physicians can do much toward elevating popular taste by encouraging similar attempts to

convey valuable information, whilst at the same time entertaining the people.—— The Foundling Hospital at New York has had over 150 babies left in its basket since last November.—— The *Pacific Journal* says there are eight institutions for the training of idiots in the United States. The largest is at Syracuse, N. Y., and has 150 pupils.—— The most important "vocative" now is the establishment of hospitals for inebriates, and such modification of the laws as will enable friends or the authorities to send the unfortunate victims to them, and to keep them there, *nolens volens*. —— The great specialist, RICORD, who has been on every side of every known professional question, has been officially appointed consulting physician to the Emperor Napoleon.—— Nelaton calls Napoleon's disease "vesical hæmorrhoids," since which valuable news was first announced, we have been consulted by at least a half-dozen old gonorrhœal veterans, who imagine they have the same disease.—— Senator Sumner failed to get the Senate to repeal the charter of the Med. Soc. of the District of Columbia. —— Jas. P. White, M. D., the retiring President of the N. Y. State Med. Soc., in his address, (*Buffalo Journal, March*, 1870,) chronicles the evidences of progress of medical science, and the catalogue should convince the most sceptical that the science is at anything except a stand-still.—— The Hospital question is still on the tapis in Chicago. The leading papers of the city advocate the views, first enunciated in this journal, as to the abandonment of the old castellated structures, though rich in fat contracts and stealings, and the adoption of the modern system. There should be ample spaces set apart in each division of the city for the purpose, cheap and numerous buildings put up, and, what has heretofore been neglected, an efficient ambulance corps organized. By the aid of the telegraph, ambulances could be ordered, when needed, as quickly as the fire engines. The present methods are simply barbarous.—— The *Richmond and Louisville Medical Journal* claims to be the largest medical monthly in the United States. —— The veteran Prof. JOHN W. DRAPER's miscellaneous works, philosophical and historical, are winning golden opinions and the most flattering notices, both in this country and Europe. As Metaphysicians always used to leave Physiology out of the question, so the Historians have been wont to omit all reference to those great physical influences which so certainly shape the char-

acter of individuals and nations. Prof. Draper's philosophical history of the recent civil war, with its causes and results, when contrasted with the *twaddle* which Mr. Froude uses to fill up the large interspaces of his occasionally brilliant descriptions, reflects honor upon the country, and the profession of Dr. Draper's choice. *L'esprit du corps* at least should make all doctors read his books. —— Six grains of Bicarb Pot. or Sod. added to each quart of fresh milk, before the cream has risen, bottled, tightly corked, and then placed in a water bath, heated to 190 degrees, and not more — the cork then coated with wax — is the Parisian method of preserving milk for a long period.—— The fancy envelopes, green on the inside and white without, are poisonous from arsenite of copper in the coloring matter. *Cave!*——A "Society for the Suppression of Useless Information" is announced.—— Among the most remarkable instances of *ante mortem* beneficence, we see announced that Drs. C. L. Ives and A. S. Munson have given $1,000 each to Yale Medical College.—— Another case of "*Railway Spine*" has been before the Chicago courts. A remarkable peculiarity in this case was the entire absence of those symptoms supposed to be diagnostic of spinal meningitis or myelitis. No febrile symptoms, disorder of respiratory, digestive or defecatory organs, no paralysis of sensation or motion, loss of weight, or physiognomic change. Chicago hopes, with this case, to keep up with New York and its McFarland variety of insanity.—— Ninety to one hundred deaths every week from epidemic small pox in Paris.—— At the University of Zurich it is said the lady students are treated with great courtesy and deference by the males. A Miss Morgan recently graduated with distinction in the departments of Medicine, Surgery and Midwifery.—— A Miss Garrett has lately been appointed one of the physicians of the East London Hospital for children. "The cry is, still they come," (not the children, but the doctresses).—— Speaking of women and children, a case of *ovarian pregnancy* has recently occurred in this city. Death resulted near the third month, rupture of the ovarian cyst occurring with fatal hœmorrhage into the abdominal cavity. We saw the specimen some months since, and were promised a full report, with appropriate illustrations, but from some unaccountable reason we have not yet received the manuscript.—— A few days since, we attended a case of labor, "short, sharp, and

decisive," in which occurred rupture of the trachea, during violent straining efforts, with resulting emphysema of the neck and upper part of the thorax. At one time this was so considerable as to interfere somewhat with respiration, and produce lividity of the face, from obstruction to the return circulation. The trouble is spontaneously abating. We dislike to say much about such cases as these last two, for fear the sex will quit the business of bearing children, and turn doctors, (or doctresses — which is it?) —— To avoid the disastrous tendency toward keeping down excess of population, so much complained of, it is well to recollect that concentrated infusion of digitalis, according to Dr. Besnier, applied in saturated compresses according to the patient's preferences, has been found an encouraging practice in orchitis. Double orchitis very often if not always, endangers subsequent obedience to the commandment, "Multiply," etc.——The question of the possible duration of pregnancy has lately been raised before a British court. Sir James Simpson "qualified" to a case of 310 days. In the case before court, intercourse 301 days before the birth gave the plaintiff £200 damages. Served him right.—— One of our contemporaries objects to the term Loot, which we affix to the section of the Journal containing valuable plunder from all sources. Clearly it is not "up" in oriental literature. We certainly shall not seek our *loot* from the columns of the secular papers, or "chronicle small beer," practices we might possibly charge upon "one of our contemporaries," were we anxious to say, "You're another!" It is all a matter of taste.—— Phosphorus is recommended in the treatment of psoriasis. It is to be exhibited both internally and externally.—— Moûtre uses for prurigo, suppositors composed of Iodoform and cocoa butter: ℞ Iodoform, gr. xx; Butyr. Cacao. ʒj. M. In suppositors vj. divid. For frictions use a drachm of the Iodoform to the ounce of simple ointment.—— The operation of transfusion is getting frequent. After defibrination of the blood, as practiced by Prof. Freer, the operation becomes almost as si mpleas the hypodermic injection, and nearly devoid of danger. No complicated apparatus is required. Nothing but reasonable care on the part of the operator.

Obituary.

We regret to notice the death, at Menominee, Mich., (March 11th ult.,) of John Murphy, M. D., a graduate of the class, '60

and '61, Rush Med. College. Dr. Murphy enlisted as a private soldier in the 37th Illinois Infantry, but was speedily promoted through the different grades to the Surgeoncy of a corps under General Banks. He served through the entire war, and at its close retired with a brilliant record, but unfortunately, like too many others, with a shattered constitution. Engaging in general practice, he shortly gained general confidence and esteem. The local paper comes to us with its columns dressed in mourning, and an account of the funeral, as conducted by the Masonic fraternity. Every evidence of sincere sorrow was manifested. Peace to his ashes, and honor to his memory.

ILLINOIS STATE MEDICAL SOCIETY, March 22, 1870.
Office of the Permanent Secretary, 181 West Madison St., Chicago, Ill.

The twentieth annual session of this society will be held in Dixon, Lee county, on the third Tuesday in May, 1870, at 10 A. M. The following Committees are expected to report: On the Practice of Medicine, Dr. C. Goodbrake, of Clinton, Chairman; on Surgery, Dr. Moses Gunn, of Chicago, Chairman; on Obstetrics, Dr. Elias Wenger, of Gillman, Chairman; on Drugs and Medicines, Dr. Charles Hunt, of Dixon, Chairman; on Necrology, Dr. J. H. Hollister, of Chicago, Chairman.

Special Committees:—On Criminal Abortions, Dr. DeLaskie Miller, of Chicago, Chairman; on Ophthalmology, Dr. J. S. Hildreth, of Chicago, Chairman; on Pulmonary Tuberculosis, Dr. J. P. Ross, of Chicago, Chairman; on the use of Plaster Paris in Fractures, Dr. R. G. Bogue, of Chicago; on Otology, Dr. Sam'l J. Jones, of Chicago, Chairman; on Arrangements, Drs. Everett, Hunt, Phillips, of Dixon, Dr. J. C. Corbus, of Amboy, and Dr. E. P. Cook, of Mendota; on Medical Education, Dr. N. S. Davis, of Chicago, Chairman.

Secretaries of all medical organizations are requested to send lists of their delegates to the Permanent Secretary as soon as elected. Medical societies are entitled to one delegate for every five members. Any respectable physician unable to attend as a delegate, or permanent member, may attend as a member by invitation, on the recommendation of the Committee of Arrangements.

T. D. FITCH.

Note to the Editor.

[The following note should have been earlier printed. We think Dr. Ames was the first *matriculant* of the College.—Ed.]

Chicago, March 12, 1870.

Prof. J. Adams Allen, M.D., Ed. Chicago Med. Journal—*Doctor:* On reading, in the March number of the Journal, Dr. Ames' address before the alumni of Rush College, I observe a foot-note states: "Dr. Ames was the first graduate of the College." A just regard for the truth of history compels me to correct the error contained in the note referred to. Dr. Ames was *not* the first graduate of Rush College; the undersigned was the first graduate of Rush Medical College. Trusting that a correction of this error will be noted in the Journal, I am, respectfully,

Your ob't servant,

Wm. Butterfield, M. D.

Brainard Medical Society.

The Society met in the Court House, in Winamac, Indiana, April 7th, 1870. Dr. J. W. C. Eaton, read a paper on "Some of the Uses and Actions of Ipecacuanha." Dr. Hoag reported a case of Epilepsia. Dr. Washburn reported a case of Uterine Hæmorrhage, caused by partial detachment of the placenta, complicated with rigidity of the os. Drs. Hoag and Cleland, reported, each, a case of shoulder presentation.

The fourth annual election of officers resulted as follows: J. W. C. Eaton, *President;* I. B. Washburn, *Secretary;* Wm. Kelsey, *Treasurer;* F. B. Thomas, J. B. Hoag, W. T. Cleland, *Censors.*

I. B. WASHBURN, *Sec'y.*

Loot.

On the Acid Dyspepsia of Infants.

By EUSTACE SMITH, M. D., Physician Extraordinary to His Majesty the King of the Belgians, Physician to the Northwest London Free Dispensary for Sick Children, Etc.

Acid dyspepsia is one of the commonest digestive derangements met with in young children, and few infants can be said to escape it altogether. A trifling complaint, and readily recovered from when attended to early and judiciously treated, if neglected it becomes a most serious and obstinate disorder, which may resist all treatment, and may lead to the most extreme emaciation, or even to death itself.

The food taken seems shortly after being swallowed to undergo an acid fermentation; sour gases are evolved, great discomfort is

produced, and nutrition is seriously interfered with. The derangement is usually caused by over-feeding with farinaceous foods. It is too commonly the case that these foods are given in enormous quantities — in quantities greater than any infant with ordinary digestive power can by any possibility assimilate. The reason of this reckless feeding is, partly, the mistaken notion which so universally prevails of the digestibility of these foods; partly, the eagerness with which the child himself will swallow large masses of sop; for the griping and flatulence occasioned by the presence of large masses of starchy matters in the alimentary canal will — if not too severe — excite a fictitious hunger which is not easily appeased. An infant of three or four months old, in whom the secretion of saliva is but lately established, or an infant of yet earlier age, who has no saliva at all, is often fed with a large table-spoonfull of corn flour or other farinaceous powder, boiled with milk or with water, four, five, or even more times in the day. The food lies undigested in the bowels, ferments, and a state of acid indigestion is set up, which does not cease with the removal by vomiting and purging of the cause which has produced it. Even a return to a simpler diet is often insufficient by itself to put an end to the derangement; plain milk and water is vomited sour and curdled, and everything taken into the stomach seems to undergo the same acid change.

As this derangement is so easily excited by improper feeding, even in healthy infants, children whose strength has been already reduced by disease, and whose digestive power is therefore lowered in proportion to the weakness of the whole system, are still more likely to be affected by the same cause. On this account acid dyspepsia is a not unfrequent sequel of acute disease in infants, and may, after apparent convalescence from the primary disorder, lead to death, by the interference with nutrition and by the exhaustion which it so often produces. The diarrhœa, which is a not uncommon sequence of some of the acute specific diseases, as scarlatina and measles, is often primarily excited by this derangement, and is too frequently a cause of death. Severe operations upon the child, such as that for stone in the bladder, may also be followed by the same complication, for anything which lowers the easily depressed general strength reduces also the digestive power, and predisposes to this complaint.

Children brought up by hand are especially liable to this acid dyspepsia, for even when fed upon a suitable diet, carelessness in the administration of the food selected, so that the stomach is overloaded by too frequent or too copious meals, or neglect of the necessary cleanliness, so that they are allowed to take milk which by being put into a sour bottle has already begun to change, will excite this indigestion. Amongst the poor of London, it is not uncommon to find a child brought for medical advice sucking at a

feeding bottle, of which the intensely sour smell at once discloses the cause and suggests means for the relief of the complaint under which he is laboring.

The earliest symptoms of this derangement are due to the uneasiness produced by flatulent distension and griping pains. The infant is restless and fretful, whining and crying, and refusing to be pacified. Large quantities of gas are evacuated, both by the mouth and the rectum, affording at first some relief, and the child becomes quieter until a re-accumulation takes place. At night the griping is exceedingly distressing, and his sleeplessness at this time by the discomfort it occasions to his attendants, is usually the symptom which assumes the greatest prominence in the mind of the mother, and is the chief reason for applying for advice. The infant, after lying for a time in uneasy sleep, starting, twitching, moaning, frowning, and drawing up the corners of his mouth, suddenly wakes up with a loud cry, and is seized with a fit of violent screaming which resists all efforts to calm him. He throws himself from side to side, jerks about his lower limbs, or suddenly straightening them out in a line with his body, becomes for a few moments rigid as if turned into stone. These attacks of colic are sometimes so severe as to cause great alarm; the child falling into a state of collapse, or being thrown into convulsions, which may be repeated again and again. The ravenous appetite noticed in children suffering from flatulence has already been referred to. This symptom usually disappears as the derangement becomes more marked. Vomiting comes on after a time, the appetite then fails, and the child is thirsty and feverish. Vomiting is at first excited by taking food, but may afterwards occur when no food has been lately taken, and in bad cases may be caused by a sudden movement, or even by a touch, as in wiping the mouth. The vomited matters consist at first of food and curdled milk, afterwards of clear fluid like water; the smell is usually intensely sour. The bowels at first are confined, but after a time diarrhœa comes on, the motions being either pale, frothy, and sour-smelling, or watery and fetid. There may be straining during the passage of a stool, in which case the motions may contain streaks of blood. An eruption of red strophulus, covering the body and arms of the child, is a not uncommon symptom; it may be mixed with urticaria.

An infant suffering from this derangement soon becomes pale and thin. His face assumes a constant expression of fretfulness, which is increased by the furrow which appears, passing on each side from the nose, to encircle the corner of the mouth. The lower eyelid and upper lip are disposed to be livid; the lips twitch, and the corners of the mouth are frequently drawn up, giving a peculiarly plaintive and helpless expression to the face. The fontanelle is depressed more or less deeply, according to the degree to

which the strength is reduced. The eyes sometimes assume a fixed stare, while the muscles of the face twitch, and the thumbs are drawn inwards upon the palms of the hands. These nervous symptoms — well known to nurses by the name of inward fits — are of importance, as being sometimes the forerunners of convulsions. The tongue is at first covered with white fur, through which red papillæ project; afterwards it is apt to become pale and clean, or with little patches of fur scattered here and there over the dorsum. In bad cases the whole body has an offensively sour smell. This smell proceeds not only from the breath, but from acidity of all the secretions; the saliva, the perspiration, and the urine being all intensely acid. The cutaneous secretion is, however, seldom in excess; more usually the skin is dry, and is in consequence harsh and rough to the feel, especially at the backs of the arms and the belly. The feet are generally cold, and the child lies with the knees drawn up to the abdomen. The coldness of the feet is no doubt one cause of the griping pains which are so constant in this derangement, for even in healthy infants abdominal pains are frequently excited by coldness of the feet, and cease when these are warmed. During the earlier periods of this disorder the complexion turns slightly yellow from time to time, the yellow tint remaining for some hours or days. Occasionally the skin becomes completely jaundiced. After the complaint has existed for some time a peculiar earthy tint is noticed of the face and whole body, which is very characteristic of chronic abdominal derangement.

If the disorder is primary, and is not soon arrested, a chronic catarrh of the stomach is often set up, the bowels becoming obstinately confined, and the vomiting continuing as a persistent condition. In other cases, again, the derangement may settle principally upon the bowels, leading to a chronic diarrhœa. The most extreme emaciation is often reached through these means, and it may be only after weeks, or even months, of illness that a termination, by recovery or by death, is arrived at.

When the disorder is secondary to some acute disease, or follows a serious operation, the strength is usually so much reduced by the original illness that the child, weakened more and more by the vomiting and diarrhœa, and by his inability to digest any nourishment whatever, soon becomes exhausted. Thrush appears upon the inside of the mouth, and the child sinks and dies. Pneumonia is a not uncommon complication in the later stages of the disease, and, if the strength be much reduced, may exist without manifesting its presence by any of the usual symptoms. There is no cough, and the heat of the body is not appreciably heightened, or if heightened at first, the elevation of temperature soon passes off. This pneumonia usually attacks the bases of both lungs.

The earlier treatment is commenced in this derangement the

more readily will the complaint be arrested, for as the strength becomes more and more reduced, and the stomach and bowels become more and more disordered, treatment which in an early stage would be at once attended by improvement loses much of its efficacy, and great difficulty is experienced in making any impression upon the disease.

When the case is seen early, and the symptoms complained of are merely griping and flatulence, with ravenous appetite, unaccompanied by sickness or diarrhœa, careful inquiry should at once be made into the diet and general management of the infant. It should be explained to the parents that the appetite will best be satisfied, not by increasing the quantity of farinaceous matter and the frequency of the meals, but by carefully adapting the food supplied, both in quality and quantity, to the digestive power of the child, so that the nourishment given may be only such as the stomach is able to digest. This may seem a simple and self-evident proposition, but it is one which is constantly forgotten. That a child will be nourished in exact proportion to the amount of food he swallows, and that the more solid the food the greater its nutritive power, are two articles of faith so firmly settled in the minds of many mothers that it is very difficult indeed to persuade them to the contrary. To them wasting in an infant merely suggests a larger supply of more solid food — every cry means hunger, and must be quieted by an additional meal. It is difficult to lay down precise rules for diet in every case of this derangement. This is a matter which can be properly learned only by experience. There are, however, certain plain rules which should always be observed. Of these one of the most important is, that farinaceous food is unsuitable to an infant under the age of three months. Before that age he should be restricted entirely to the breast, supposing that the secretion of milk be of proper quality and be supplied in sufficient quantity. In cases, however, where additional food has to be given on account of the insufficient supply of breast milk, recourse must be had to cow's milk, or to the milk of the ass. If cow's milk be used, it should be diluted with a third part of lime-water, in order to prevent the too firm coagulation of its casein. Even, however, when thus diluted and alkalinized, the cow's milk is sometimes undigested by young infants, who seem to thrive better upon the milk prepared with a very small quantity of arrow-root or baked flour. This scarcely accords with the statement made above, of the unsuitability of such foods to young infants; but an explanation of the seeming contradiction is found in considering the action of the farinaceous food under such conditions. The arrowroot itself probably contributes little, if anything, to the nutrition of the body, but when thus intimately mixed with the cow's milk it has a mechanical action in separating the casein into minute portions. The curd, therefore, coagulates, not in one large

clot, but in a multitude of small clots, which are more readily attacked by the digestive juices. It is, however, as has been said, always a risk to give farinaceous food to young infants, and the same object may be as readily effected, and without any danger to the child, by adding a small quantity of isinglass or common gelatine to the diluted milk, in the proportion of one teaspoonful to four ounces.

In older children, brought up upon artificial food, the above symptoms are often complained of, even although the quality of the food with which they are supplied leaves nothing to be desired. In these cases it is the quantity which is in fault; the child is supplied with food largely in excess of his wants or his powers of digestion, and the stomach and bowels revolt against the burden imposed upon them. For an infant of six months old, one, or for a very robust child, two, teaspoonsful of farinaceous food, carefully prepared with milk, and given twice in the day, are as much starchy matter as he is able readily to digest. His other meals should be composed of milk and lime-water, or the milk and water with isinglass, as directed above.

The kind of farinaceous food is of some importance. Different foods vary very much in the proportion of their several constituents, and the albumen, gluten, salts, etc., they contain, are to be considered quite as much as the starchy matter. The very best food is, perhaps, pure wheaten flour slowly baked in an oven till it crumbles into a light grayish powder. This, prepared with milk, and sweetened with milk sugar, forms an admirable morning and evening meal. It may be varied occasionally with other farinaceous articles, but whatever be the food selected, the quantity mentioned must not be exceeded. On alteration in the diet, in accordance with the above rules, a small dose of castor-oil, or rhubarb and soda, to clear out undigested matter from the bowels, and the administration of a little bi-carbonate of soda or potash, with an aromatic to neutralize any remaining acidity and promote digestion, are all the measures that are required at this stage.

If the derangement have gone on to vomiting and purging, with an intensely sour smell from the breath and from the ejected matters, other means must be resorted to. In this case the stomach and bowels are filled with the acid products of fermentation, and the vomiting and diarrhœa are merely the forcible efforts of the alimentary canal to expel its irritating contents. Sedatives to the stomach and astringents to the bowels are here out of place; we shall best cure the derangement by assisting the expulsion, and not by obstructing the exit of the fermenting food. In determining, however, the exact measures to be adopted, the state of the child's strength is an important consideration, and this is best estimated, not by the condition of the pulse, but by the degree of depression of the fontanelle. If the fontanelle is not much hollowed, a tea-

spoonful of ipecacuanha wine should be at once administered, and should be repeated every ten minutes until vomiting be produced. The acrid matters in the stomach having been thus evacuated, half a teaspoonful of castor-oil should be given after a short interval, to act gently on the bowels, and the child should be allowed nothing but a little cold, thin barley-water, given occasionally, with a teaspoon. At the same time the belly should be kept covered with a hot linseed-meal or bran poultice, and the child warmly wrapped up should be kept perfectly quiet in his little cot.

If the derangement have only existed a short time, the above measures will be usually successful in checking the symptoms, and the child will be found to retain the breast milk, or the milk and water with which he is supplied in small quantities. Any tendency to acid fermentation that may remain should be neutralized by five-grain doses of bi-carbonate of soda, given three or four times a day, and the patient may be allowed to return very gradually to his ordinary diet.

When, however, the derangement is of long duration, or is secondary to a severe operation or to some acute disease, the symptoms are not so easily overcome. Here the weakness, as shown by the depressed fontanelle, will not allow very active measures to be employed, and therefore the accomplishment of our twofold object, viz., of removing already formed acid from the system, and of preventing further fermentation, requires the most careful management. Emetics are here out of the question, for the strength will not bear further reduction, and the administration of such a remedy would be attended by the greatest danger. Our first care should be to endeavor to restore the circulation to the extremities, by placing the feet as high as the knees in hot mustard and water. If the weakness be very great, the whole body may be immersed in a mustard bath as high as the neck. It is of extreme importance in such cases to restore the proper action of the skin, for it is by this means, chiefly, that we hope to effect the escape of acid from the system. On being removed from the bath the infant should be carefully dried; a hot linseed-meal poultice is then to be applied to the belly, and the child, well wrapped in flannel, must be returned to his cot. The warmth of the surface must be kept up by hot bottles placed by his sides, and the feet and legs should be well rubbed at intervals with the hand alone, or with a liniment composed of equal parts of compound soap liniment and the compound liniment of camphor. If the child can bear the motion, frictions with the same embrocation may be used to the whole body; but in cases where the weakness is extreme and the vomiting obstinate, violent retching may be excited by the slightest movement, so that the frictions would have to be discontinued. In such cases the feet and legs should be wrapped in hot flannels on which some flour or mustard has been sprinkled, and

the most perfect quiet should be enforced. A napkin must be placed under the chin, to receive all matters ejected from the stomach, and when moistened the cloth must be immediately removed and a clean one applied in its place.

If diarrhœa exist, astringents are not to be employed so long as a sour smell from the breath and evacuations indicates the continuance of fermentation in the stomach and bowels. For a child of a year old, twenty drops of castor-oil can be administered, and will be usually kept down. After its action a simple chalk mixture may be given, or a draught containing five grains of bi-carbonate of soda, with three grains of nitrate of potash, in some aromatic water, three or four times in the day. Half a drop of tincture of capsicum is a valuable addition to each dose of this mixture.

If there be constipation, the bowels must be opened by an enema containing castor-oil, and be kept in regular action by the occasional administration, as required, of one or two drops of a solution of podophyllin in alcohol (a grain to the drachm), or by suppositories of castile-soap placed in the rectum.

The form of nourishment to be given in these cases is of the utmost importance. All matters capable of undergoing fermentation must of course be excluded. Even milk itself, however diluted and alkalinized, can seldom be borne, as it is usually vomited sour and curdled immediately after being taken. Woman's milk is usually well digested, but not always. In some cases it seems to agree as little as the milk of the cow; in others, where the irritability of the stomach is very great, the mere movement of the mouth in the act of sucking may be sufficient to excite a return of the vomiting. If this be found to occur, the breast milk should be given with a teaspoon. In cases where a return to the breast is impracticable, or is not followed by the expected improvement, a good food is whey, made fresh as required, by adding prepared rennet to cow's milk in the proportion of a teaspoonful to the pint. To two tablespoonsful of the whey add one tablespoonful of fresh cream, and dilute with two tablespoonsful of hot water. Of this food small quantities can be given at regular intervals, and care must be taken that it be either hot or cold, but not tepid, as liquid food given in a lukewarm state would be apt to favor a return of the vomiting. Liebig's food for infants, carefully prepared with freely diluted cow's milk, will often be borne; but in very bad cases it is inferior to the diet just described. In addition, the waning powers of life must be supported by five-drop doses of pale brandy, given in a teaspoonful of the food every hour, or even oftener, according to the condition of the fontanelle.

By such measures success is often attained even in the very worst cases of this derangement. The obstinate vomiting is best arrested not by sedatives, but by giving the stomach as much rest as is consistent with supporting nutrition. Of all special drugs,

calomel in doses of one-eighth or one-sixth grain, laid dry on the infant's tongue, is, perhaps, the one which is the most generally successful; but our chief reliance should be placed on a careful diet, and on stimulating and hot applications, so as to promote the circulation and encourage the free action of the skin. The existence of cold feet alone would be a sufficient obstacle to the success of any treatment whatever.—*American Journal of Obstetrics, Etc.*

Note on the Value of the Wheat Phosphates in Therapeusis.

By J. S. Hawley, M. D.

The researches of modern physiologists have fully demonstrated the importance of inorganic principles in nutrition. For example, however rich in fibrin and albumen the blood may be, it is not properly constituted, nor can it carry on its life-giving functions, without the presence of the salts of iron, soda, and lime. Among these salts stand pre-eminently the phosphates.

Among the early and successful investigators in this field was M. Mouries, who arrived at the following conclusions:

1st. That phosphate of lime plays a more important part in nutrition than has heretofore been believed. Independently of its necessity as a constituent of bone, this salt maintains that irritability without which there is no assimilation, and consequently no nutrition.

Its insufficiency therefore produces death, with all the symptoms of inanition, while its insufficiency in a less degree produces a series of lymphatic diseases.

2nd. The food consumed in cities is deficient in this respect, and nurses' milk has consequently the same defect. The infant suffers from the deprivation of this element so indispensable to its development and life. Hence one of the causes of the increase of the mortality of infants.

3d. *The addition of this salt, in combination with animal matter, to alimentary substances, obviates one cause of disease and death.*

These conclusions were arrived at as the result of a large number of well directed experiments and careful analyses of alimentary substances. He further demonstrated the existence of a constant relation between the animal heat and the amount of phosphates in the blood, from which he deduces the principle that these salts keep up animal irritability, without which nutrition is impossible.

The following is the testimony of Dr. Tilbury Fox, not merely to the value of the phosphates in nutrition, but of the great superiority of the natural over the artificial phosphates.

"There is something *essentially special in the Organized phosphates, those, in fact, which have been formed by passing through a living organism, as compared with those artificially prepared.*

It is not the *amount* but the *kind* exhibited which produces the good result. In infants' food, and in our bread and flour, the organized phosphates and cerealin (which has a somewhat similar action to pepsin) have been deliberately rejected. *These may be administered medicinally to children and infants when the assimilative function is at fault.* In eruptive diseases of the scalp (which are generally associated with faulty assimilation), in rickets, marasmus, chronic diarrhœa, and impaired nutrition of all kinds, the *Wheat Phosphates* act marvellously. Pallid children pick up tone, color, and flesh; worms disappear, the secretions become healthy, and disease goes."

But it is not altogether necessary to look abroad for written testimony to the value of the organized phosphates in alimentation.

The following is an extract from remarks before the New York County Medical Society, by Prof. A. Jacobi:

"The evils of inanition receive marked illustration in practice among children. As an instance of the chronic starvation of special tissues, might be mentioned rachitis, a disease exhibiting defective nutrition of the osseous and muscular systems. The proportion of phosphate and carbonate of lime (chiefly phosphates) in the bones of infants is 60 to 63 per cent.; while in rachitic children, and particularly in rachitic softening of the cranial bones, it falls as low as 50 and even 20 per cent. *The lack of these elements* is most probably due to excessive elimination; we cannot stop this, and must meet it by an *increased supply*. Experience has shown that *a diet rich in phosphates* will often, without medicine, effect a marked improvement.

The following illustrates, in an important particular, the superiority of the natural over the artificial phosphates:

M. Andrè Lauson, in a paper read at the Academy of Medicine, (*Gazette Médicale*, August 14th, 1869), calls the attention of French surgeons to the fact that to promote osseous growth, the administration of phosphate of lime, either in the shape of hypophosphites, or in that of powdered bone, is unavailing. Several attempts made with these substances have never been successful. It is because their form does not allow of their digestion and assimilation. On the contrary, *earthy phosphates, such as are elaborated by vegetables, are real aliments.* Now, wheaten flour contains but ·4 per cent. of phosphoric acid, and ·02 per cent. of carbonate of lime; in wheat bran, on the contrary, we find 2·5 per cent. of phosphoric acid, and ·11 per cent. of carbonate of lime.

Pure flour is, then, deprived of its phosphates to a great extent, and the bread made with it is not the proper aliment for the patients referred to in this article."

The above quotations abundantly exhibit the value of wheat phosphates in nutrition. These phosphates are abundant in the bran of wheat, may be easily extracted and reduced to a flour, and

thus become a *medicinal food* which will supplement in an important particular the ordinary food upon which infants and children are fed.

It would be useful, as appears from the above extracts, in all cases of inanition, to the offspring of scrofulous patients, in whatever condition of life, and especially to that large class of illy nourished children of poverty found in asylums and hospitals.

The intelligent practitioner would frequently be relieved from embarrassment in his attempts to nourish his feeble and emaciating patients, by having within his reach an available and convenient form of wheat phosphates.

It may be said that a much simpler method of arriving at this point would be to use unbolted flour for the food of such patients as require a diet rich in phosphates. Doubtless such a course would be judicious and useful to the patient. But most of the foods furnished for children are deprived of phosphates, and the article in question would afford an easy and ready means of restoring them and of regulating the quantity. Besides, it is no easy task to overcome a fixed and universal custom, while it is both easy and convenient to prescribe a remedy in those cases where it is indicated.

Greenpoint, L. I.

*** It may not be without interest to note in this connection and in answer to some of the opponents to the use of the wheaten phosphates in alimentation, that Mr. F. Crace Calvert, in a paper read before the British Association, (*Chemical News*, Am. Rep., Nov., 1869,) has stated that "most of the phosphates contained in wheat are not combined with the organic matter, but are in a free condition." (ED. GAZETTE.)

—*Medical Gazette.*

Local Treatment of Croup by Lactic Acid.

A KNOWLEDGE of the power possessed by lactic acid to dissolve fibrinous exudations induced Dr. Adolph Weber to try it in cases of croup. At first he used it only after the operation of tracheotomy, partly with a view to keep the tracheotomy tubes clean, and partly hoping that the lactic acid might affect the membranes which extended downwards into the bronchi. The results were so favorable in both respects that he proceeded to try it in severe cases of croup before having recourse to tracheotomy. Since then he has not once had occasion to operate, and has not lost a single case of croup. In some very severe cases in which inspiration and expiration were equally obstructed, and the condition of the faucus indicated an abundant fibrinous exudation in the trachea, the difficulty of breathing was completely relieved within seven to ten hours of using this remedy, and two or three days after, no trace of the local affection remained.

During the treatment there was not, as is generally the case, an expectoration of tough membranous sputa, but gradually the

whistling, barking inspiration and expiration were replaced by distinct rattling noises; the voice, before quite suppressed, began to assume a hoarse timbre, and considerable quantities of loose, white, frothy phlegm were expectorated during the fits of coughing, until at last the struggle for breath quite ceased, and the disease assumed more the character of a catarrhal affection of the throat.

The treatment consists in the local application of the remedy to the windpipe by means of inhalation. The patient is made to inhale a solution of lactic acid (15 to 20 drops in half an ounce of water) at first every half hour, and afterwards, when the respiration improves, every hour or every two hours a solution of 10 to 15 drops in half an ounce of water.

The inhalation is discontinued as soon as the dyspnœa has subsided, and to promote expectoration chamomile tea is exhibited.

In using the inhalation, care must be taken that the vapor does not affect the eyes or face.

With this treatment was conjoined the internal exhibition of carbonate of soda every half hour or every hour, which was thought to exert a beneficial effect upon the exudation.— Med. Times & Gaz., Jan. 22, 1870.—*Med. News.*

Diet in Certain Surgical Cases.

It is now many years since the extirpation of bone with a view to its reproduction by means of the periosteum was first practiced, and it is now a tolerably frequent operation. In the *Abeille Médicale*, M. André Sanson gives his brother surgeons a hint as to the diet most suitable to patients under such circumstances, so as to hasten their complete recovery. In zootechny, it is by particular kinds of food that the maturity of cattle is hastened. The fodder which is richest in calcareous phosphate is the best suited for the purpose, because that is the chief constituent of bone. The seeds of graminacous, leguminous, and oleaginous plants are given with this view to the young animals, which thus, as it were, become older than their real age. To apply this principle to man is now the question. The food of cattle being, of course, unsuited for the human race, we must examine what alimentary substances fit for it will best answer the purpose of favoring the reproduction of bone. Now beans, peas, lentils, and such like leguminous seeds, contain upwards of 0·85 per cent. of phosphoric acid, and are therefore to be recommended as the best diet in cases of the above description. Bread, which is such an important element of food in France, requires to be specially mentioned. We have often stated in these columns that the whitest flour, although so pleasing to the eye, is far from being the most nutritive. Wheat flour does not contain more than 0·40 per cent. of phosphoric acid, and

0·02 of lime; that of rye, on the contrary, possesses 0·70 of the former, and 0·05 of the latter; but the bran of wheat contains as much as 2·50 of the one and 0·11 of the other; so that flour of the first quality is deprived of the greater part of its phosphate. Hence, patients in whom the regeneration is to be promoted, ought to eat brown bread in preference to white. This is a far better plan than endeavoring to introduce phosphates into the economy in their mineral state.—Galignani.—*Med. Gazette.*

The Sulphited Phosphate of Lime.

Phosphate of lime, in whatever state it may be, dissolves readily in an aqueous solution of sulphurous acid. The solution has the taste and smell of the sulphurous acid, but greatly diminished in intensity. A boiling heat slowly decomposes the solution, sulphurous acid escapes, and a heavy white crystalline precipitate is formed, which, when washed and dried over sulphuric acid, is found to have the formula, $3\,CaO,\ P^2O^5,\ SO^2,\ 2H^2O$. This sulphited phosphate of lime has no smell or taste, and is distinguished from all other sulphites by its stability. Even when heated for several hours up to 266 degrees Fahrenheit, it is not decomposed. But though it withstands the action of the atmosphere indefinitely, it is rapidly oxidized when mixed with the soil. It acts, in that case, as a soluble phosphate of lime, and a trial of several seasons has proved it to be an excellent manure. It has also remarkable antiseptic and disinfecting powers, and its physical properties recommend it strongly for these purposes. It is a clear white powder, which stains and soils nothing, and can be brushed off from carpets and garments, leaving no mark; it is free from smell and taste, and harmless to animal life. Its harmlessness and freedom from taste and smell suggest its being tried in therapeutics, where it may prove a valuable agent.

The solution of phosphate of lime in sulphurous acid also acts as a disinfectant, and in some cases with even more energy than the powder. It may be used to advantage in places where a liquid can be more conveniently applied than a solid.—*Boston Journal of Chemistry.*

Nephrotomy.

On Thursday, Feb. 3, the operation of cutting into the kidney for removal of renal calculus was performed by Mr. Durham, at Guy's Hospital. The theatre was crowded with students and others anxious to see so rare an operation. We believe, indeed, that there is only one instance of its performance recorded, and that was by a surgeon of Venice, upon an Englishman, some hundred and fifty years since. Two or three stones were then extracted, to the great relief of the patient, a urinary fistula remaining in

the loin. Owing, doubtless, as much to the uncertainty of the diagnostic signs of renal calculus as to the supposed risks of the procedure, the operation fell into oblivion, until a paper read before the Medico-Chirurgical Society last year, by Mr. Thomas Smith, of St. Bartholomew's Hospital, again brought the subject before the notice of the profession. Although Mr. Durham's bold attempt ended in disappointment, we saw enough to convince us that as far as cutting down upon the kidney is concerned, there is neither great difficulty nor any apparent grave risk in the proceeding. Mr. Durham made his incision along the edge of the erector spinæ, from the pelvis to the eleventh rib, and quickly reached the hilus of the kidney without difficulty, and with little or no loss of blood, but no stone was found, although the symptoms previously manifested had been such as are considered characteristic of stone in the kidney. The hilus of the kidney and the ureter, for the space of an inch and a half, were thoroughly examined, but not opened, no stone being felt, and their general appearance, as well as that of the kidney, being perfectly healthy. So far from the operation having been injurious, five days later the woman expressed herself as being more free from pain than she had been for a long time! Full details of the case will be published whenever it may be considered to have terminated, whatever the termination may be.—Med. Times & Gaz., Feb. 12, 1870.—*Med. News.*

Iodine in Intermittent Fever.

Professor Willebrand, of Helsingfors, has, in certain forms of the disease, successfully used the following: R. Iodine, gramme j; pot. iod., gramms ij; aq. distil, grammes x; M. S. Five drops given in water every two hours. Relapses seldom occur, as in the use of quinine. Iodide of iron, in doses of ten centigrammes, four times a day, for cachexia and anæmia.—*Archives Generales.*

Surgery of the Hip-Joint.

Mr. William Adams has divided subcutaneously the neck of the thigh bone within the capsular ligament, by means of a fine saw. This is a great triumph of subcutaneous surgery, as the case is doing well.—*Med. Press and Circular.*

Sir Duncan Gibb

Attributes the diminished longevity of the Jews to the persistent use of olive oil for culinary purposes, resulting in what he terms a "*Sanguineo oleaginous expression*," pendency of the epiglottis, premature decrepitude, and a tendency to death from congestive disease.—*Med. Bulletin.*

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Original Communications.

ARTICLE I.—*Colloid Tumor of the Broad Ligament; Two Uterine Tumors; Persistent Ascites; Gastrotomy, Recovery; Subsequent Pregnancy, and Parturition of Still-Born Child.*

(Under the care of JNO. E. OWENS, M. D., Surgeon to St. Luke's Hospital.)

Mrs. F., æt. 25, well-nourished, florid complexion, came under my care, August 26, 1867, eight months previous to which she was married. She had never been pregnant. Menstruation, which commenced when she was 17 or 18 years of age, continued normally for two years, since which time it has been irregular, very scanty, and, during the last year, very painful. Her last menstruation occurred about six weeks ago, there being but very little blood. Urination has not been normal since last December —sometimes passing only a half-teacupful, and at others nearly a quart. In the spring of 1866, she discovered a tumor in the left iliac region, the size of a small orange. When first seen, she presented the appearance of a woman advanced to the 8th or 9th month of pregnancy. It was on account of this tumor and of the distended abdomen, which interfered with respiration, digestion

and locomotion, that she sought advice. She was the more solicitous for advice, because a medical gentleman had diagnosed pregnancy, and the ordinary limit of a physiological tumor had passed. Suffice it to say, that upon tapping the abdomen, a rather heavy tumor principally to the left of the median line, and reaching as far as the umbilicus, was discovered. At a subsequent tapping, a small tumor was made out, growing, it was supposed, from the uterus. There was quite prominent a fluid umbilical hernia, whose walls, later in the history of the case, were not much thicker than parchment. Profs. Byford and Powell were good enough to see this case with me. In the first months of the tappings, an operation seemed to be contraindicated, because of the following reasons:—The mobility of the tumor was not then distinctly made out,—an operation was not urgent,—therapeutic means of disposing of the fluid had not been tried. The contraindications, however, by degrees, subsided, viz:—The tumor was found to be quite movable, operative interference became urgent,—therapeutic means failed. Diuretics effected no increase in the quantity of urine. Elaterium produced copious watery discharges, but the slight reduction in the size of the abdomen was far out of proportion to the distress and debility occasioned by the action of the medicine. The patient was reluctant to submit to its further use, but strenuously insisted upon an operation. That the case was an urgent one, may be gleaned, in part, from the following tappings:—

May 12th, 1867, 4 gals.; June 4th, 4 gals.; June 16th, 4 gals.; Aug. 4th, 4½ gals.; Aug. 25th, 4 to 5 gals.; Sept. 4th, about 4 gals.

The tumor pressed upon the iliac vessels, and hence this rapid ascetic effusion. Not only this, the effect of these frequent tappings and the great loss of serum were manifesting themselves upon the patient's general health. She was, however, in the best condition for an operation, the morning of which the patient was ordered to remain in bed. The bowels and bladder having been voided, and the patient placed upon a common pine table, assisted by Prof. Powell, Drs. C. G. Smith and Rutter, the operation of Gastrotomy, for the removal of the tumor, was performed Sept. 4th, 1867. Although she was tapped Aug. 25th, the abdomen was considerably distended with fluid at the time of the operation.

Operation:—An incision through the skin and superficial

fascia, from a point two inches above the symphysis pubis to a point one inch and a half above the umbilicus; hemorrhage having ceased, and the transversalis fascia and peritoneum punctured with a grooved director, a probe-pointed bistourie was introduced, and the small opening enlarged sufficiently to introduce the forefinger, which guarded the bistourie as it completed the incision to the above-mentioned points. There was considerable oozing at this stage, but it soon ceased. As the sides of the opening were pulled aside, a firm modena-colored tumor presented itself. The larger portion was on the left of the median line. It (the tumor) reached as high as the umbilicus. A pedicle three-fourths of an inch in length held it to the broad ligament. About the junction of the upper fourth with the lower three-fourths, the tumor was somewhat closely adherent to a coil of the small intestine. Upon further examination, the second tumor, from two inches to two inches and a half long, was found growing from the body of the womb. A third tumor, one-half inch in length, was located at the left angle of the fundus, near the entrance of Fallopian tube. Having adjusted the ecraseur, we endeavored to tighten the chain very gradually; but upon the most moderate break in the pedicle tissues, the blood welled up in profusion. The tumor was very easily separated from its pedicle—indeed too easily for the woman's safety and our own comfort. The pedicle was of a brittle nature, and its tissues readily broke under the pressure of the chain, whether the instrument was managed slowly or otherwise. When the tumor was separated from its pedicle, hemorrhage from the stump was so great, that the efforts of all of us were directed to that point. Silk ligatures were at first tried, but it was impossible to manage them on acccount of the firmness and shortness of the stump—the silk slipping from it, in spite of our best efforts to keep it in place. Finally, a needle, armed with a double ligature, was thrust through the stump, and tied on the side containing the bleeding vessels. There was considerable oozing from the adhesions as they were torn from the tumor, but from only one artery was there much hemorrhage. Just as we were about to ligate this vessel a new source of anxiety presented itself, in consequence of the interference of respiration by chloroform, probably assisted by the loss of blood. Of course, everything was to be dropped, and our energies and means directed to

the remedying of this horrible condition. The face was livid; the parts about the corners of the mouth were already beginning to pale; inspiration had ceased. The patient was turned upon the side and back alternately; clots of blood and bloody serum rushed out upon the table—the intestines being held in place by the hand. In order to pull forward the tongue with a tenaculum, it required the strong iron handle of the pin-nippers to open the jaws, so firmly were they fixed. Water thrown upon the face, Spir. Ammon. held near the nose, artificial respiration, and brandy internally, resuscitated the patient. A ligature was applied to the remaining artery, the patient was again turned upon the side, to empty the abdomen of any remaining fluid, the ends of the ligatures were brought out at the lower end of the wound, and the latter closed with the hare-lip suture, which included the edges of the peritoneum. In a few places, where the abdominal walls were thick, silver wire was introduced, through the skin, between the pins, in order to close the wound as accurately as possible. Lint with simple cerate was placed over the line of incision, and over the lint a bandage. The patient, when removed from the table, was in very good condition. A little more brandy, containing Morph. Sulph. gr.ss. was given.

Sept. 4th, 4 P. M. Has vomited two or three times since the operation; has slept a few minutes at a time; pulse 96, soft and regular; expression bright and pleasant; patient in good spirits; skin moist; extremities warm; ordered Morph. Sulph. gr. $\frac{3}{4}$, in a little sherry; if thirsty, crushed ice.

Sept. 4th, 10 P. M. In good condition, but has vomited considerably since last visit; pulse 100; has slept a few minutes at a time. Ordered Morph. Sulph. gr. j., in sherry, and should it be vomited within half hour, use crushed ice till the stomach becomes settled; then give Morph. Sulph. gr. $\frac{3}{4}$; beef-tea, from one to four teaspoonsful, when she awakes through the night, provided she retained it.

Sept. 5th, 8 A. M. Pulse 102; skin soft, moist and warm; face a little swelled; no pain; slept some during the early part of the night; after 2 o'clock slept very well; vomited some through the early part of the night, when, at her urgent request, her husband gave her a half tea-cup of iced water, which seemed to settle her stomach, as she did not vomit afterwards, and whenever there was

any tendency to vomit, a small drink of iced water would allay it. She vomited the grain dose of morphia, but not the second (½), and slept pretty well till morning.

Sept. 5th, 1 P. M. Pulse 96; drew off 1½ pints high-colored urine.

Sept. 5th, 6 P. M. Bandages somewhat displaced; applied adhesive strips across abdomen to keep the lint in place; pulse 90; has slept two hours since last visit, and is feeling very comfortable.

Sept. 6th, 8 A. M. Pulse 114; has urinated two or three times since last night; slept from 8 last evening till midnight, without morphia; at 12 o'clock took a drink of iced water, and slept till 6 o'clock this morning; ordered chicken soup containing a small quantity of toast.

Sept. 6th, 5 P. M. Pulse 96. Being anxious to administer Tr. Ferri Chlor., but fearing it would irritate the bowels, only 15 gtt. were ordered, the dose to be increased should it agree with her.

Sept. 7th, 11 A. M. In pretty good condition, though not quite so well as she was yesterday. The dose of iron disagreed with her, and her attendants, very wisely, did not repeat the dose. It (iron) caused slight nausea, some vomiting, with pain through the intestines. She reports that the stomach swelled, (Tympanitis,) but is now subsiding; but very little tenderness; about midnight, she took Morph. Sulph. gr. ¾, but vomited it; the anodyne was repeated in half an hour, after which she was comfortable, and slept well; ordered her to continue chicken or beef soup; Morphia Sulph. when restless, or in any way uncomfortable.

Sept. 8th, 11 A. M. Awoke at midnight from colicky pains; took Morph. Sulph. gr. ¾, after which she slept till daylight.

Sept. 9th, 8 A. M. Passed very little urine last night; some burning in the hypogastric region; drew off one-half pint urine; dressed the wound; incision, for more than half its length, healed by first intention; a few drops of pus at the two points of exit of the ligatures, which are still held fast; considerable pain where the bladder is voided, in consequence of inflammation of its peritoneal lining; ordered warm water enema.

Sept. 9th, 5 P. M. Injection brought away no fecal matter; ordered Ol. Ricini ℥ss., at 6 P. M.

Sept. 10th, 8 A. M. Bowels moved at 1 A. M., bringing away a

large quantity of dark, green, and very offensive matter; some pain during the operation of the bowels, but it subsided with the operation.

Sept. 12th. Removed the uppermost pin, the wound being perfectly healed at that part; a little suppuration about two or three of the pins.

Sept. 14th. Removed two pins from upper part of wound, supporting that part with adhesive plaster; ligatures still tight; the only suppuration worth mentioning is at the points where the ligatures pass through the wound.

Sept. 16th. Removed a pin from inferior end of wound.

Sept. 18th. Removed the two remaining pins.

Sept. 23rd. Patient up to-day for a short time; she wears a flannel bandage fitted to the abdomen, and retained in place by straps around the thighs.

Sept. 29th. Both ligatures came away to-day; at the upper orifice ʒss. of greenish pus came away. There being considerable tenderness, with some pain, on the right of the umbilicus, the patient was directed to remain in bed for a couple of days.

Oct. 1st. Paid last visit to-day. The wound has perfectly healed. The patient tells me that she feels as well as she ever did, except that she is yet a little debilitated. The bowels are regular, the urine passes easily and in good quantity, the appetite is good, and she sleeps well.

I have only time to give a rough description of the tumor. It was firm and heavy. The surface, over which ran rather large vessels, was, for the greater part, nodulated. The knife, as it passed through it, produced a creaking noise. It consisted of two elements, viz.: A fibrous material, so arranged as to form a greater or less number of cells or cavities, varying, in size, from a duck shot to a marble. These cavities, or cells, were filled with a colorless, jelly-like substance, of the consistence of very thin jelly. This cell contents was very easily pressed out; indeed, generally a touch seemed sufficient to cause it to disappear.

The sequel of this case occurs about two years from the date of the operation. Sunday, Aug. 22nd, 1869, about midnight, the husband of this woman came for me to visit her, at Evanston, in consultation with Dr. Geer, of that place. She was in labor, the pains having commenced about eight o'clock in the morning (Aug.

22nd.) The abdomen was much distended from the presence of two tumors, and a pregnant uterus at full term. The distension was so great, that, a month previously, a small opening appeared between the umbilicus and the pubis, in the line of the incision. The orifice discharged sometimes a dark, watery fluid, and sometimes a little pus. The integument around the fistule had ulcerated to the extent of the palm of the hand. Above the umbilicus there was another small opening. Two rather large tumors existed—one on each side of the uterus; but their bulk seemed so much incorporated with the womb's general enlargement, that their size could not be very definitely settled. The os tincæ could only be reached by introducing the whole hand, except the thumb, into the vagina. The mouth and neck of the womb were both soft and dilatable, but no part of the child could be touched. Nor were we able to detect the sounds of the fœtal heart. The amniotic fluid had come away during the afternoon. The pains came regularly, and the patient was generally in good condition. We left her till next morning, having first drawn off the urine.

Monday, Aug. 23rd. By introducing the hand, as before, we could touch the child's head. The womb occupied the same position as when we last saw her. Neither Dr. Geer nor myself were able, by pressing upon the abdomen, to cause the os tincæ to approach, in the least degree, the fingers of the right hand, in the vagina. The womb was firmly held in its abnormally high position. The fœtal heart sounds were again listened for, but in vain. The discharge from the vagina was of a greenish color, and somewhat offensive. We had feared hemorrhage. It was now our opinion that the child was dead; that the labor was progressing well under the circumstances, and that, as the patient was still strong, there was no indication for interference in any manner.

Dr. Geer, on Thursday, Aug. 26th, wrote me that the patient had been delivered of a still-born child, Tuesday, Aug. 24th; that there was no hemorrhage; that the cord was so soft that it would not bear any traction whatever, and that upon introducing the hand for the purpose of removing the placenta, he discovered quite a large bulge or platform, at the expense of the posterior wall of the womb. The placenta was fixed above this, in a *cul de sac*. The child was quite large; its cuticle was easily rubbed off; blebs were present in a few places. The tumors are now

distinctly felt. There are three, viz.: one, $5 \times 3\frac{1}{2}$ in. on the left side of the uterus; another, $5 \times 4\frac{1}{2}$ in. on the right; a third, between the latter and the front of the womb. The third is small, and is, probably, an outgrowth of the second one. The patient tells me that, five months ago, the tumors were about the size of an egg. Several coils of intestines seem to be adherent to the walls of the abdomen, over which the skin and fascia are very thin. The womb did not contract very readily after the removal of the placenta. The child being dead and the fœtal circulation no longer going on, the vessels supplying the placenta and child became plugged up before delivery; hence, our expectations in regard to hemorrhage were not realized. Several months after delivery, the patient called to see me. The tumors were reduced in size about one-half.

No. 112 *Randolph Street.*

ARTICLE II.—*Tubular Pregnancy.* By W. C. HUNT, M. D., Chicago.

Nov. 12th, 1869, I was called to see Mrs. H.

Her menses had been regular from the birth of her last child, nine years before, until about a month previous to my being called. They had then ceased, some of the usual symptoms of pregnancy immediately following. The main object of my being called was, to relieve, if possible, the nausea and a very distressing sense of impending syncope, which threatened upon the slightest exertion.

Upon the supposition that she was pregnant, little was done, except to relieve (temporarily) the nausea and faintness. Two weeks after this I was again called. The menses were apparently re-established, but very scanty. The tendency to syncope had not abated, and the patient's anxiety was, the fear of "heart disease." "Two of her near relatives had suddenly died of it." During the following week, another slight hemorrhage from the uterus occurred, which cast doubt upon the previous diagnosis, and from this time forward, during the whole of her illness, the hemorrhage continued at intervals of from three days to a week.

At this time, Prof. Freer (who was the family physician) was called in, and an examination revealed the existence of a tumor of the size of a man's fist in the right upper portion of the hypogastric region. But little attention was paid to this, for from this time, an entirely new and different set of symptoms supervened, which masked the whole character of the case. At intervals of three or four days, paroxysms of pain in the right hypochondriac and epigastric region would come on suddenly and violently, continuing for two or three hours, and ending in complete syncope. With recovery from the syncope, came entire relief of all the symptoms, except a yellowness of the skin, which followed these attacks, to disappear usually at the time of the next.

The passage of stones from the gall bladder was diagnosed.

The tumor was suspected to be in the ovary. In this condition the patient continued, alternating between the pain and syncope, and gradually improving during the interval, without much loss of strength when the pain was absent, until the 14th of January, 1870, when, after an unusually severe attack of the pain, she died in the syncope that followed.

Autopsy: 30 hours after death. Present, Profs. Freer and Blaney, and Dr. Parkes.

Skin, mucous membrane and conjunctiva intensely jaundiced.

Cavity of the abdomen filled with blood, of which 2½ gallons were dipped out.

Liver pale, exsanguine; gall bladder entirely empty, large and flabby.

The right Fallopian tube contained a fœtus of three months growth. The placenta attached at or near the junction of the tube with the uterus—a portion of its attachment had separated, and from this the fatal hemorrhage had occurred, rupturing the distended walls of the tube, and escaping into the abdominal cavity. This attachment of the placenta was the source of the frequent hemorrhages from the uterus during the last two months.

Note. The uterus and appendages taken from the above case may be seen in the museum of the Rush Medical College.

ARTICLE III.—*Poisoning by Belladonna.* By CHAS. E. HOGEBOOM, M. D., Blackberry, Illinois.

On the 14th of December, 1869, I was called in great haste, to see John Ramsey, of Blackberry, Illinois. The messenger said he was dying.

He was a patient of Dr. Pritchard, of Kaneville; suffering from phthisis, and confined to his bed. His condition when I first saw him at 6 1-2 P. M.: Insensibility complete, aphonia, loss of power of deglutition, irregular muscular contractions, pallor, pupil of eye greatly dilated, and insensible to light, pulse 138, respiration stertorous; in half an hour the face became red and swollen, eyes suffused with blood, pulse 160, very weak and intermittent, subsultus tendinum, coma.

He had taken nothing since 10 o'clock, A. M., except a fluid dram of Ext. Rhei, taken at 5 o'clock, P. M. Soon after taking this, he complained of dryness in the fauces, wanted some water; but could not swallow, and soon after became insensible.

Diagnosis: Belladonna poisoning.

℞ Morphiæ Sulph. gr.ss, every fifteen minutes; after several doses once in half an hour.

At first the morphia was put on the tongue to be absorbed; after three doses had been given, he could be made to swallow by the presence of fluid in pharynx.

We gave six or eight grains of morphia, with no other effect than a seeming relief of symptoms of poisoning. After each dose there would be an increase of irregular muscular contractions; but the pulse became slower and stronger. In about five hours he began to talk incoherently; in eight hours recognized some of his friends. He recovered.

Dr. Pritchard came about 10 o'clock, and shared responsibility in the case.

An analysis of the Ext. Rhei., fd., (so called) gave a large proportion of Belladonna. Ramsey must have taken about fifty drops of the fluid extract of Belladonna.

ARTICLE IV.—*Biliary Calculi.*

In the November No. of this Journal (for 1869) I had the pleasure to lay before its readers a report of a case of removal of these troublesome concretions by the aid of olive oil administered in a large (one pint) dose. Since the date of that communication, the patient has suffered from dyspepsia more or less distressing. Indeed, with a persistence of his old symptoms generally, except the violent pain, until about two weeks ago; at which time he was seized, as before, with the violent, lancinating, cramping pains in the right hypochondrium. Impressed with the efficacy of the olive oil as administered on the former occasion, he procured and drank a pint of oil, upon his own responsibility. There was no alleviation of the symptoms during the succeeding twenty-four hours, at the expiration of which time he passed, per anum, more than one hundred biliary calculi—more than sufficient in bulk to fill a half pint measure.

The case, in addition to the one previously reported, presents no new features, and is only offered as another datum in the therapeusis of this painful malady. W. H.

Original Translations.

ARTICLE I.—*Legros and Onimus upon the Influence of Electric Currents upon the Nervous System.* From the Journal de l'Anatomie et de la Physiologie. (Robins.)

[Continued from May No., 1870.]

§ 4.—*The Influence of Continuous Currents Acting at once upon the Nerves and upon the Muscles.*

Thus far we have studied the influence of electric currents in cases in which the reophores are placed directly in contact with the denuded nerves. These conditions are very simple for experimental purposes, but never exist for medical applications, as the electric current is never applied directly upon the nerves, these being always covered with a layer, more or less thick, of the different tissues.

In the application of electricity to man, two cases may be distinguished, the one in which the reophores are placed along the track of a nerve, and in regions in which it is very superficial, and the other in which one of the reophores is placed along the track of the nerve and the other upon the muscle to which this nerve is distributed. In the case in which the reophores are placed along the course of the nerve, the condition of direct action upon the peripheral nerves is established; but as the nerve is not in immediate contact with the electrodes, the products of the electrolysis do not accumulate there, and it is thus, to a great extent, protected from the chemical actions which the electric currents might determine upon the nervous filaments.

It remains for us to study the influence of electricity in that case in which it acts at once upon the nerve and the muscle.

If an electric current is passed from one leg of a frog to the other — not skinned, but from which the head has been separated from the trunk, in order to prevent all voluntary action — it will be perceived that there can be no longer obtained, but with great difficulty, the alternating contractions referred to already. Whatever may be the direction of the current, it is always at the moment of closing the current that the most energetic contractions are obtained. The strongest and most complete contractions no longer occur, in this case, in the limb traversed by the direct current, but, on the contrary, in that traversed by the ascending current. It is at the closing, and not at the opening, that these contractions occur, and they continue still under the form of partial or fibrillary contractions, during some time after the closing of the current. When the animal commences to be fatigued, the contractions reappear at the opening of the current.

If the spinal cord be diminished (?) or destroyed, or if the animal be poisoned by narcotics, the contractions which were originally very strong in the limb traversed by the ascending current, diminish very perceptibly in energy and in extent; they are then more decided in the opposite limb.

In applying electricity through the skin of robust animals, generally, energetic contractions are obtained only at the moment of closing the current. The same is true of man.

In man, in pathological cases, in which sensibility is found to be diminished, the most energetic contractions are determined equally

by employing a descending current, whilst in the normal state, and especially in very excitable persons, it is by means of the ascending current that the most vigorous contractions are obtained.

In cases of anæsthesia, the ascending current occasions very feeble contractions. These facts, which we have several times verified, and which will receive still farther confirmation from those which we are about to study, when we come to examine the influence of electric currents applied directly to the cord, prove, in a very clear manner, that the ascending current determines reflex contractions in the muscles of the limb which it traverses.

As we have already said, it is the ascending current which acts most energetically upon sensitive nerves, and it is known, on the other hand, that excitation of the sensitive fibres determines reflex contractions.

Every reflex action is effected by the intermediation of the cord; but there is another circumstance, which was forgotten among the facts just stated, which permits a portion, at least, of these contractions to be considered as being not *reflex* but *induced.* It is known, indeed, that the electrical excitation of a nerve determines, in another nerve in contact with it, a change of condition, which manifests itself by the contraction of the muscle to which the nerve remains attached. This fact, discovered by M. du Bois Raymond, has received the name of induced contraction; it may be appropriately enunciated thus: *the state of activity in a nerve may induce the same state in a neighboring nerve, although they may not be connected by a nervous centre.* This proposition, thus enunciated, appears very bold, and moreover, it is the real expression of a phenomenon discovered by experiment.

Indeed, in applying an electric current to the nerve of a muscle, the only portion of the nerve through which the electric current circulates is that embraced between its points of contact, and the contraction of the muscle occurs not because the electric current reaches the muscle, but because the nerve is excited at one of these points. All that portion of the nerve between the muscle and the nearest point of contact of the current is therefore not traversed by the current: in this portion, therefore, the nerve is at rest, and it is the change of condition experienced by this portion which determines the excitation of the motor nerve of the muscle. Indeed, as may be seen later, it is possible to excite in this case the electro-

tonic state of that portion of the electrized nerve lying between the muscle and the nearest point of contact of the current, but that fact does not contradict what is here asserted, that is to say, the induced contraction of muscles by the excitation of sensitive nerves alone, the impression not having traversed the spinal centre. We cannot examine here the different physiological or pathological conditions in which this proposition could be considered, but, regarding exclusively the subject now under consideration, we believe that this experimental fact ought to be taken into consideration in the conditions of electrization of mixed nerves. Moreover, when the cord is destroyed, contractions in the limb traversed by the ascending current do not become weakened immediately, although it is after the expiration of only a very short interval that this phenomenon is manifested, and it is permitted to assume that, during the first moments in which contractions, still energetic, are maintained, they are due to the direct influence of the sensitive upon motor nerves. The last paragraph may be epitomized by the following conclusions:

Whenever nerves and muscles are acted on at the same time, the strongest contractions always take place at the moment of closing, whatever may be the direction of the currents.

In the limb traversed by an ascending current, the contractions are most energetic when sensibility is preserved; when this is abolished or diminished, the contractions, under the influence of an ascending current, are very feeble. They are, then, much stronger when a descending current is employed.

The contractions, under the influence of an ascending current, are due to reflex action, and probably also to the phenomenon observed by M. du Bois Raymond, and termed induced contraction.

§ 5.—*The Electrotonic State, or Electrotone.*

The effect determined in a nerve by the passage of a continuous current remains to be investigated. If a constant galvanic current is made to pass through some fraction of a nerve, this undergoes, throughout its entire length, a change of state, which is manifested by an increase or a diminution in its own electric current. If the current of the pile has a direction similar to that of the nervous

current, the latter is increased in intensity; it is, on the contrary, diminished if the direction of the two currents is inverse. M. du Bois Raymond has applied to this phenomenon the name *electrotonic state* of the nerve. He distinguishes two different phases of this condition, that during which the nervous current undergoes an increase of intensity, which he calls *positive*, and that during which it undergoes a diminution, which he terms *negative*. Then, at the moment when a voltaic current is made to pass through a portion of a nerve, a current in the same direction is produced throughout the whole length of the nerve, both above and below the electrized point. This current is rendered sensible by a galvanometer placed at any point of the nerve. This electric current, which is formed thus, outside of the points directly electrized, had been obtained, until very recently, only in nervous fibre. It might thence be logically concluded that this was a special phenomenon of nerves, and that it was in intimate relation with their functioning. M. du Bois Raymond admits that the electrotonic state is due to a molecular polarization of the nerve analogous to that which is determined in all conducting bodies by the effect of the passage of an electric current. This polarization consists in this, that the nervous molecules, endowed with two electric poles, turn all their positive poles from the side toward which the current is directed, and their negative from the side at which it enters. Under the influence of an exterior current, the nervous molecules are arranged in regular succession, in the manner designated under the name "polarization," and assume this arrangement, even in the portions of the nerve not traversed directly by the current. The result of which is the circulation in the nerve of a new current, which must augment or diminish, according to its direction, the nervous current itself.

Before referring to the experiments of Matteucci, which seem to reduce these different states to simple chemical action, we should again relate the facts discovered by M. Pfliiger.

According to this physiologist, a voltaic current, passing through a determinate length of nerve, decomposes the nerve into two different portions, regarded from a physiological stand-point. The portion of the nerve in contact with the positive pole (anode), loses its excitability, and this state has received the name of *anelectrotonic;* near the negative pole (cathode), the excitability is, on

the contrary, augmented, and this state is designated by the name *catelectrotonic.* These changes of condition are found, not only at the points of contact of the poles, but likewise in their neighborhood; moreover, they are observed especially with moderate currents. They augment with the intensity of the current, up to a certain maximum, next diminish, disappear, and pass into opposite effects.

Such is the fundamental experiment of M. Pfliiger. Whilst a current traverses a portion of the nerve, he moistens the nerve with salt water, which, in its normal state, constantly provokes muscular contractions; on the side of the positive pole, the salt water determines no contraction, whilst it determines them when it is placed in contact with the portions of the nerve approximating to the negative pole. With an ascending current, that is to say, when the negative is placed farther from the muscles than the positive pole, the same effect is obtained, which demonstrates that the excitability determined at the negative pole is sufficiently strong to reach the muscles by passing through a portion of the nerve traversed by a current, and rendered inexcitable by it in one point.

M. Bezold has repeated these experiments, and has epitomized the results which he obtained, in the following propositions:

In nerves, as in muscles, the current passing into these organs in a constant manner, produces, during all the time of its passage, a molecular polarization. This molecular state determines direct excitation only near the negative pole, and the nerve, like the entire muscle, is only excited indirectly by the irritation produced at the negative pole.

At the moment of the opening of the current the excitation takes place directly, only near the positive pole, and the parts which approximate to the negative pole are placed in a state of irritation by the influence of the excitations originating at the positive pole. In other words, at the closing of the current the excitation is due to the constant departure of the current, and at the opening, a state of irritation is induced, during some time, by the perturbations of molecular equilibrium.

M. Bezold adds, and we insist upon this fact, that the excitant effect of a constant current is due, probably, to chemical actions produced by the passage of the current, and that electric excitation is only a determinate form of chemical irritation.

The question of molecular polarization being hypothetical, we will not permit ourselves to be drawn into discussions of this sort, but, from the conclusions of Bezold, it results that, during the passage of the current, the centre of irritation is located near the negative pole, whilst at the opening, the regions in contact with the positive pole become the cause (source?) of excitations, and finally that these phenomena are probably due to chemical action. These conclusions approximate nearly to those of Matteucci, who made, during the later years of his life, very important investigations in relation to the electrotonic state.

In order to explain the theory of Matteucci, we are obliged to reconsider the question from its origin; and, moreover, this discussion is too important for us to be able to summarize it in a few lines.

It is known that when certain inorganic bodies, such as platinum, are electrized, there are formed at the same time *secondary currents*, directed inversely to the principal current. These currents are due to the chemical actions which take place, on the one hand, between the products of the electrolytic decomposition gathered upon the metallic electrodes, and, on the other hand, with the liquid which is in contact with the electrodes. The products of decomposition, as may be ascertained by the aid of litmus paper, are, at the negative pole, alkaline, and at the positive, acid. When the liquid which bathes the electrodes is pure water, the products of decomposition are, oxygen at the positive pole, hydrogen at the negative. Now, in this case, the secondary currents may still be formed, as is proved by the following experiment, due to Matteucci: A wire of platinum, well depolarized, is introduced by one of its extremities into a test tube filled with hydrogen gas. After having left this tube, during some hours, in contact with the gas, if it be next applied to the galvanometer, a deviation of the needle will be obtained.

If, in place of a platinum wire, there be substituted a cord, moistened with salt water, a cylinder of clay, saturated with the same, a fragment of vegetable or animal matter, as slices of potatoes, stalks of celery, muscles, nerves, electric phenomena of the same character will be likewise obtained. Of all these substances, nerves possess this property to a very high degree.

"I select," says Matteucci,* "in a chicken or a rabbit, which has just been killed, the sciatic nerve, at least 60 to 80 millimetres. I assume it to have been already tested experimentally that this nerve, placed upon the cushions of the galvanometer, exhibits no indications of an electric current. I then take this nerve and place it upon platinum electrodes in such a position that the extent traversed by the current between the electrodes may be 25 or 30 millimetres, and that two ends of the nerve, each about 15 to 20 millimetres in length, remain hanging outside of the electrodes. Then I transmit the current from a little pile of not more than eight or ten elements, during a period not exceeding a fraction of a second, and which, ordinarily, I continue from thirty to sixty seconds. After this passage, I quickly transfer the nerve to the cushions of the galvanometer: immediately I obtain a strong deviation, which depends upon the duration of the passage of the current, and upon the power of the pile, and which, in every portion of the nerve situated between the poles, indicates a current contrary to the current of the pile. I find, likewise, indications of a current, upon touching outside of the poles — that is to say, between the points of the nerve which were in contact with the negative pole, and with the positive, and which were near, and at points most distant, or neutral — which had not been in the track of the current of the pile. In these portions situated outside of the electrodes, the secondary currents have the same direction as the current of the pile, and experiment has demonstrated that the strongest secondary current is always that at the end of the nerve which is beyond the negative pole. It has been recognized, likewise, that by prolonging considerably the passage of the current, or by using a weaker current, the secondary currents obtained in the exterior parts all take, finally, the same direction as the intermediate current; that is to say, by being at all points, both between the electrodes and outside of them, contrary to the current of the pile. If we recall, here, the known principles of electrochemistry — that is to say, that there is always an electric current produced at the point of contact between a base and an acid, between the water and the acid, between the base and the water, a current which goes directly from the base to the acid, from the water to the acid, from the base to the water — we will under-

* *L'electro-physiologie.* (*Revue des cours Scientifiques*, 8 août, 1868.)

stand, without difficulty, how these secondary effects are developed in nerves after they have been traversed by electricity, from the moment when we know that at the contact of the electrodes the nerves gather the products of the electrolysis."

In order that secondary currents may be obtained, it is not necessary that the nerve be fresh, it suffices that it be moist, and that its structure be not altered; these phenomena occur still in the nerves of animals dead several hours, and in nerves plunged during several hours in water at 40 degrees of temperature. They disappear after the nerve has been compressed at any point in such a manner as to destroy the homogeneity of the axis cylinder. Matteucci supposes, after experiments made upon bodies such as moist chalk, pieces of potato, which give secondary currents much more energetic when they are traversed in the direction of their axis by a metallic wire, that the axis cylinder plays, in the nerve, the role of a better conducting body, and that it is upon this that the products of electrolysis are deposited.

Lastly, the experiment of Matteucci consists in covering with two layers of hempen or cotton threads a platinum wire of one metre in length and one millimetre in diameter; these threads are moistened with salt water, and arranged consecutively, as in the experiment upon electrotone, that is to say, with one of their extremities placed upon the cushion of the galvanometer, separated from each other by a distance of 20 to 25 millimetres, whilst the other rests upon the electrodes of the pile, or upon the cushions communicating with the electrodes. The current is scarcely formed, when a strong electrotonic current is obtained, even at the distance of 30, 40, 60 centimetres, and more, from the electrodes of the pile.

By applying to the platinum wire, thus covered, litmus papers, the paper will be seen to redden at the points of contact of the positive electrode; outside of it, however, and even at a great distance from these points, the paper becomes blue, and consequently indicates an alkaline reaction. These entirely opposite effects occur near the negative pole.

As to the phenomena observed by Pfliiger, consisting of a loss of excitability near the positive pole, and an augmentation of excitability near the negative, Matteucci explains them by this fact, that in contact with the negative pole the nerve is loaded

with hydrogen and alkaline matter, and that it is loaded, in contact with the positive pole, with oxygen and acid. Now, as Humboldt first discovered, the excitability of the nerve is augmented when it is kept in contact with a very weak alkaline solution, whilst it is weakened in contact with an acid solution much diluted.

According to Matteucci, the phenomena of electrotone, and those of the catelectrotonic and anelectrotonic states, are then produced only by the chemical actions which are developed by the passage of the current. It is important to compare this opinion of Matteucci with the conclusions of Bezold, which, although less definite and clear, seem to give the same results.

We accept very willingly the greater portion of the theories of Matteucci; however, whilst recognizing that they are certainly true, we believe that they are so only in part, and that they are insufficient to explain all the phenomena.

The most serious objection in this identity between the electrotonic state and the secondary currents is the rapidity of transmission of electrotone, for this transmission is equal, not to that of electricity, but, indeed, to that of nervous influx; and, just as this condition is one of the best arguments to demonstrate that nervous influx cannot be identified with electric phenomena, we ought, in this case, to admit equally that these phenomena cannot be identified with the electrotonic state.

Moreover, if electrotone was a phenomenon purely physical, the force of the current would not act differently according to its intensity, and it has been shown that, far from augmenting with a strong current, the electrotonic state diminishes, and disappears completely.

Lastly, the electrotonic state, that is to say, the loss of excitability near the positive pole, is produced without the direct application of the electrodes to the nerves: indeed, in several cases, a diminution of excitability is observed in the neighborhood of the positive pole, when the latter is separated from the nerves by a thick layer of epidermis and adipose tissue.

The experiments of Matteucci remain no less complete, and possess great importance, although we believe, according to our own experiments, two cases should be distinguished, that in which the nerve possesses all its excitability, and that in which the nerve

no longer retains its excitability, and acts as a conducting body, susceptible of undergoing the phenomena of electrolysis.

In the first place, every current, whatever may be its properties, its origin, and its direction, determines an excitation of the nerve to which it is applied. The nerve, fresh and living, assumes an active condition at the least disturbance, the slightest irritation, whether this irritation be mechanical, chemical, or electrical; hence, it is evident that the electric current, which modifies profoundly the molecular condition of bodies which it traverses, will determine nervous activity, and that, too, whether the current be ascending or descending, and at the moment of the closure as well as at the moment of the opening, for in each of these moments the molecular state is modified.

But at the end of some time, when the nerve has been exposed to the air, or has been fatigued by the current, its excitability disappears, and here, then, are interposed different conditions and phenomena, due, not to the direct action of the current upon a portion of the electrized nerve, but to the action of derived currents and currents of polarization.

Foreign Correspondence.

PARIS, April 22nd.

During the last few months there has been an epidemic of small-pox, in Paris, of considerable gravity.

The following table indicates the number of deaths from this disease in the hospitals and in private life included:

	1868.	1869.	1870.
January,	80	64	183
February,	71	49	302
March,	76	62	411

The mortality has been in proportion to the wealth and poverty of the different quarters of the city—the poorer the quarter, the greater the number of deaths.

The greater number of cases of the disease has been observed

to be with adults, especially between the ages of 20 and 30 years. This latter fact is explained for Paris by the census showing that there are five times as many adults in Paris as children, and four times as many old people as children. A larger number of males than of females have been attacked; yet, comparatively, more of the feminine sex have succumbed than of the former.

This epidemy has also clearly shown that the mortality is very great when attacking children during the first year of their existence—ten times greater than between the ages of 20 and 30. It has been especially very destructive to children under three months of age—thus showing that vaccination ought always to be done as near birth as possible.

The Medical Commission, appointed by the hospitals of Paris, in their report, said, in regard to the effects of vaccination: "We all know that in a certain number of cases its benefit disappears to such a degree, that certain persons having beautiful vaccinal cicatrices succumb from confluent variola, or more often from the malignant, and especially the hemorrhagic forms; we know that a larger number of vaccinated persons are attacked with variola discreta, which sometimes present great gravity, and may terminate by death; but we also know that these facts are only the exception, and that the majority of vaccinated persons are only lightly attacked; and, on the contrary, we are not ignorant if it happens that persons not vaccinated are slightly attacked, this is by far the greater exception; and, that for persons not vaccinated, when attacked with small-pox, the danger, the confluence and the malignity constitute the rule and not the exception." The Commission here give statistics taken not only from the present epidemy but from former ones, proving the above assertions.

I am happy to give your readers the conclusions of so scientific a body in regard to the good effects of vaccination, as I am well aware that, of late, the contrary opinion is gaining ground with a certain part of the population of England and the United States.

Let it be fully understood that the above statements have reference to vaccination that has taken effect anterior to an attack of small-pox, because the Commission are in accordance with good authority, when they declare that a person affected simultaneously, or nearly so, with small-pox and the eruption of vaccination, that both affections march independently the one of the other. In

such a case the small-pox will take its natural course, either benign or malignant, as the case may be.

They also declare their disbelief in regard to vaccination being capable of attenuating the natural march of small-pox, when made at the beginning of this latter disease; yet, as popular opinion claims the contrary, they say there is no harm in vaccinating the person under the influence of variola, and if the patient demands it, the shrewd physician will give him this consolation. It will be perceived that the Paris Commission do not admit the doctrine of celebrated English authority—Aitken, for example—where he says, "a person exposed to the variolous contagion, if then vaccinated, it will mitigate the disease." The period of incubation has been, in general, from twelve to fourteen days.

Among the complications the most worthy to be noted are several cases of Endocarditis, Endopericarditis, Pericarditis, softening of the heart, which occurred always in severe cases, no cardiac complication being noted in varioloid patients. Owing to the medical constitution now existing in Paris, the most frequent complications have been laryngeal, bronchial and pulmonary. In fact, we may say there is a sort of atmospherical epidemy now reigning in Paris, which attacks the tonsils of a great number of persons, lasting three, four and five days, causing great prostration and severe lumbar pains. With this latter I was affected, and had also to treat some of my friends for the same.

In regard to the treatment of variola, the attention of the Paris medical profession has principally been drawn to the medicament proposed by Dr. Chauffard, which consists in the employment of phenic acid in large doses; not as a specific, thus suppressing well-known indications of treatment, but as specially destined to act upon the pyrogenic and toxic accidents of the secondary fever.

The dose employed has been from 25 centigrammes to 1¼ grammes a-day. This medicament has been perfectly tolerated by the patients, causing no vomiting and only a little diarrhœa at the end of six or seven days' administration. It is not certain even that the diarrhœa was caused by this acid. Consecutive abscesses have been much less common where phenic acid has been given.

The patients have been daily washed with water containing this acid, and afterwards covered with powder from head to foot;

linen often changed; windows often open, to give continually pure air; and whenever the rooms appeared vitiated, fumigations of juniper were employed.

At the same time the patients have had broth and some wine, from the beginning, and food as soon as they requested it.

In my next letter I propose to treat of a certain kind of tumor affecting the urinary meatus of women, a very interesting case just having been treated by myself and a good Paris surgeon.

A. W. Bosworth.

Editor's Book Table.

The Indigestions: or Diseases of the Digestive Organs, Functionally Treated. By Thomas King Chambers, Honorary Physician to H. R. H. the Prince of Wales, etc., etc. Third American Edition, revised. Philadelphia: Henry C. Lea. 1870. Pp. 383.

It is a noticeable fact that a third edition not being yet required in England, the author sends the MS. for publication to America. We fancy that this is due to the fact that Dr. C. is progressive to an extent more pleasing to the American than the British mind. He has a philosophical and at the same time an intensely practical method which has for many years especially won our esteem and confidence, as we have again and again indicated through the *Journal.* This treatise is worth a whole shelf-full of systematic treatises that could be selected even among modern works.

Indigestion complicates about all ailments. Oftentimes it is all there is of the so-called disease. No matter what the nomenclature is, modern physiology teaches that the point of prime interest is to take care of nutrition. Appropriate local conditions being secured so far as possible, the physician's business then is to furnish suitable nutriment on the one side and due elimination on the other. These three are all. What medicines can do, may be more or less questionable, but about these things there can be no question.

Some ten dozen cases are added to those contained in the first edition. There are ten chapters and a copious index. He discusses, after the introduction: Indigestions, acute and chronic: Indigestions of various Foods; Local Pains in the Stomach arising from Indigestions; Vomiting; Flatulence; Diarrhœa; Constipation and Costiveness; Nerve Disorders connected with Indigestions; Causes of the Indigestions. Starting from a physiological basis he illustrates departures from the normal condition by an immense number of cases clearly and concisely stated. Treatment is given, with a perspicuity and definiteness of purpose, which will be found peculiarly gratifying to the practitioner. To those physicians who rarely buy a book, and look more to what they call practical matters than theories, we would say, you will make money by purchasing this book, reading and pondering it well. The influence its author has already had on the professional work of the time has been very great, and it is certain to increase the more he is studied, and the more he writes.

The Membrana Tympani, in Health and Disease. By Dr. A. Politzer, of Vienna. Translated by A. Mathewson, M. D., and G. H. Newton, M. D., Surgeons of the Brooklyn Eye and Ear Hospital. Pp. 183. For sale by Messrs. Keen & Cooke, 113 & 115 State St., Chicago.

The student of aural medicine can form no more excellent habit than that of examining with care the external meatus and membrana tympani. Whatever may be said of the value of other means of diagnosis in diseases of the ear, a careful inspection of the meatus and membrane reveals by far most frequently the conditions upon which pain and impaired hearing depend.

It would be difficult to estimate the amount of physical pain and mental distress caused by neglected diseases of the ear, which could be easily prevented, if physicians were in the habit of simply making an examination of these portions of the ear, by means of concentrated light, thrown into the external meatus with the concave mirror, as recommended by V. Troetsch.

The brief but valuable monograph of Politzer has been placed within the reach of every American student by the excellent translation of Drs. Mathewson and Newton.

The work is an admirable statement of what is known concerning the membrane tympani and its diseases.

The value of the work is much enhanced by numerous chromo-lithographs, illustrating the normal and the abnormal conditions of the membrane.

The translators merit the thanks of the profession for this valuable labor. E. L. H.

The Gentleman's Stable Guide: Containing a Familiar Description of the American Stable; the most approved method of Feeding, Grooming, and General Management of Horses; together with Directions for the care of Carriages, Harness, etc. By ROBERT MCCLURE, M. D. V. S., author of Diseases in the American Stable, Field and Farm Yard. Philadelphia: Porter & Coates, 822 Chesnut Street. Pp. 184. 12mo.

The character of this book is well indicated in the title. Every physician who keeps a horse will find herein many valuable hints upon the various topics included. It is a very sensible and practical treatise. The hygienic care of horses is very clearly set forth, and the therapeutics sufficiently simple and "common sense" in their character.

Books Received.

Obstetric Operations, Including the Treatment of Hemorrhage. By ROBERT BARNES, M. D., Lond., F. R. C. P., Obstetric Physician to, and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas' Hospital, etc., etc. With Additions, by BENJAMIN F. DAWSON, M. D., late Lecturer on Uterine Pathology in the Medical Department of the University of New York, etc., etc. New York: D. Appleton & Company, 90, 92 and 94 Grand street. 1870. 8 vo, pp. 483.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F. R. S., etc., etc. Fifth Edition, revised and enlarged. Philadelphia: Henry C. Lea. 1870.

The Private Life of Galileo. Compiled principally from his Correspondence and that of his eldest daughter, SISTER MARIA CELESTE, Nun in the Franciscan Convent of St. Matthew in Arcetri. Boston: Nichols & Noyes. 1870. Pp. 300.

Only a Girl: Or, a Physician for the Soul. A Romance from the German of Wilhelmine Von Hillem. By Mrs. A. L. WISTER. Philadelphia: J. B. Lippincott & Co. 1870.

A Practical and Systematic Treatise on Fractures and Dislocations. By A. JACKSON HOWE, M. D., Professor of Anatomy in the Eclectic Medical Institute. Cincinnati: Charles F. Wilstach & Co. 1870. Pp. 424.

United States Sanitary Commission Memoirs. Surgical. Cambridge: Riverside Press. 1870.

Basham on the Kidneys.

The late period at which the above were received, prevents further notice in the present number.

Pamphlets.

Reduction of Dislocations. By WILLIAM WARREN GREEN, M. D., Professor of Surgery in the Medical School of Maine.

Prof. Green has issued a pamphlet of eleven pages upon the above named subject, being a reprint from the *Boston Medical and Surgical Journal.* He tells us in a prefatory note that the paper was commenced two years previously to October last; and, in some additional remarks, that it was completed previous to the publication of Prof. Bigelow's book on the Hip.

Prof. Green believes that the untorn portion of the ligament or ligaments constitutes the main impediment to the reduction of all dislocations. He tells us that he sat under the surgical instruction of Prof. Moses Gunn in the winter of 1854–5, and that the principle which that teacher then applied to two luxations of the hip, (viz., the dorsal and ischiatic), and to the several dislocations of the shoulder, was so convincing to him that he adopted it and has since then extended its application to all luxations. This general application of the principle, Prof. Green ably supports by both argument and reference to cases occurring in his practice.

Archives of Ophthalmology and Otology. Edited and Published simultaneously in English and German. By Prof. H. KNAPP, M. D., in New York, and Prof. S. Moos, M. D. in Heidelberg. Vol. 1, No. 1. New York: William Wood & Co. Carlsruhe: Chr. Fr. Muller'sche Hoffbuchhandlung. 1869.

It is the intention of the editors to issue the "Archives half yearly, in spring and autumn," by separate independent numbers, each to contain about 250 to 300 pages, and two numbers to form a volume. The present No. contains 364 pages, besides ten or twelve leaves of plates and diagrams. It is well printed upon beautiful paper, and the chromo-lithographic plates, as promised in the prospectus, are superb. The matter is entirely original, and contributed by men of eminence both in this country and Europe. If the present No. is any indication, the "Archives" will prove invaluable, not only to the ophthalmologist and otologist but to the general practitioner. Address Wm. Wood & Co., publishers, New York City. $7.00 per annum.

Editorial.

Back Numbers Wanted.

☞ Twenty-five cents, each, will be paid for Nos. 11, 12, 15 and 16 of this Journal, for 1869.

The Transactions

Take up so much space in this number, that we are reluctantly compelled to defer much valuable matter with which we have been favored. Meanwhile, we promise, if the American Medical Association does not sustain itself better the next year than for this and several years past, we shall take the liberty hereafter utterly to ignore its proceedings.

Prof. Tardieu.

[By the following clipping from a recent Paris letter, it will be seen that ours is not the only great capital where confusion has prevailed in Æsculapian circles.]

"The medical students are in revolt. One of their professors, Dr. Tardieu, is an expert of acknowledged ability. He was called in by Prince Pierre Napoleon to examine the wound on his jaw, as alleged to have been inflicted by Victor Noir, a few hours after the event at Auteuil. Before the High Court at Tours, the Doctor forgot the man of science in the courtier. The students took note of his partial evidence, and when he resumed his lectures he was received with hisses, hootings, cries of "resign," "go to the Tuileries," etc. This state of things has now existed for several days, becoming intensified by time. The amphitheatre, where the doctor lectures, can accommodate 1,000 persons, but 500 more squeeze in to see the sport. Four o'clock in the afternoon is the hour for lecture, but long before this the theatre is full. Some students kill time in reading novels, others arranging their bets on the result of the "demonstration" in hand, while the vast majority fall back on music. The concert opens with the popular chant, "Holy Spirit, descend upon us," which would be unobjectionable if it were not so immediately followed by cheers for Patti, and "*la femme a barbe*," no allusion *la diva*. The only orchestral accompaniments are wooden and tin whistles. There is a sudden and combined howl; all eyes are turned upward, and some half dozen students are observed on the glass roof, grinning like gorgons at those below. Music has its charms, for the *Marseillaise* is sung, and the performers, pleased with their rendering of it, cheer their noble selves and resume the refrain. Vivas follow for Victor Noir and Rochfort, the latter being at last voted President of the French Republic, with full powers to give the students everything they may demand. It is four o'clock; the door opens; quite a stream of doctors enter, and at last Tardieu, who, pale and grave mounts the estrade—Pandemonium then breaks loose—the doctor bows and retires, followed to his carriage by the Furies. But a number of strangers have got into the crowd—above all, law students, with whom the hunting down of a medical expert ranks among the first of legal virtues. But Bob Sawyer is just—he will have none but Athenians proper, to pronounce an ostracism, and for the future, every medical student must present his card before being admitted to the lecture-room. Thus a fair vote will be taken on Dr. Tardieu. The pupils—especially the juniors—called the "Mountain"—demand his resignation. This he refuses, and the other professors promise to make common cause with him; if so, the University of Medicine must be temporarily closed. In 1865, Dr. Tardieu resigned as Dean of the University, rather than communicate

what he considered an unmerited reprimand from the Minister of Public Instruction to the students. But of late, his evidence before juries was more of the advocate than the cool impartiality of the judge."

The Red Blood Corpuscle.

At the recent reception of the American Medical Association, Surgeon Woodward showed the red blood corpuscle magnified 40,000 diameters. By a private letter, we are informed that he pointed out the central, elevated portion discovered by Prof. Freer, which was shown indistinctly. Referring to Prof. Freer's opinion that it was the nucleus, he remarked that he was himself inclined to the opinion that it was produced by drying and shrinking. Those who have seen (as we have repeatedly,) Prof. Freer's beautiful demonstrations from blood drawn freshly, and placed immediately on the slide, will at once appreciate the incorrectness of Surgeon Woodward's idea. By the way, the blood corpuscles furnished by renal hæmaturia, exhibit this central mammillated projection with remarkable clearness.

Speaking of the American Medical Association, our correspondent will pardon us for quoting and adopting the sentences with which he closes his note: "A great deal of time was wasted in the discussion of ethical questions. Until we can succeed in infusing—or transfusing—a little more honor into the veins of many medical men it will be useless to prate about ethics. And until we succeed in establishing medicine upon a more scientific basis, and meet together for scientific discussion, our meetings will be but of little avail, and '*that's what's the matter.*'"

Sir James Y. Simpson,

The celebrated Scotch author and practitioner, is dead. The profession and the world herein sustain an almost irremediable loss, which will be widely deplored. We have as yet no details. We suppose that in Boston his sudden demise will be attributed to his advocacy of Chloroform, and too little respect for the feelings of sundry of their magnates whom a recent letter of his disposed of summarily. It is to be hoped that the effort to falsify history by the Wells resolution, in the American Medical Association, may not have a similar disastrous effect upon any body.

Ancient Norse Surgery.

In the Sagas of Snorro Sturleson, we read of Thormod, a Scald, (A.D. 1030) who was wounded by an arrow which penetrated the chest. He broke off the projecting part and waited patiently, meanwhile assisting while other wounded men were attended. The doctress (or surgeoness) (who we hope was not jeered at by the masculine walkers of the wards,) said: "'Let me see thy wound and I will bind it.' Thereupon, Thormod sat down, cast off his clothes, and the girl [*sic*] saw his wounds, and examined that which was in his side, and felt that a piece of iron was in it, but could not find where the iron had gone in. In a stone pot she had stirred together leeks and other herbs, and boiled them and gave the wounded men of it to eat, by which she discovered if the wound had penetrated into the belly; for if the wound had gone so deep it would smell of leek. She brought some of this now to Thormod, and told him to eat of it. He replied, 'Take it away, I have no appetite for my broth;' then she took a large pair of tongs and tried to pull out the iron; but it sat too fast and would in no way come, and as the wound was swelled, little of it stood out to lay hold of. Now, said Thormod, 'Cut so deep in that thou canst get at the iron with the tongs, and give me the tongs and let me pull;' she did as he said. * * * Then Thormod took the tongs and pulled the iron out; but on the iron there was a hook, at which hung some morsels of flesh from the heart—some white, some red. When he saw that, he said, 'The king has fed us well. I am fat even at the heart roots;' and so saying he leant back and was dead."

In a subsequent reign, that of Magnus the Good, we are informed that after a great battle: "The King ordered the wounds of his men to be bound; but there were not so many doctors in the army as were necessary, so the King himself went round, and felt the hands of those he thought best suited for the business; and when he had thus stroked their palms he named twelve men, who, he thought, had the softest hands, and told them to bind the wounds of the people; and although none of them had ever tried it before, they all became, afterwards, the best doctors." From them, the chronicle further relates, "very many good doctors are descended." This ordeal of palmistry may be commended to the

Committee on Preliminary Qualifications of the American Medical Association.

Make Haste Slowly.

We give all due credit to the uneasy gentlemen who think they are engaged in the cheerful business of elevating the profession by loud declamation of their desires. But prior to adoption of the methods they wish to see in operation, we commend to them a remark of Lord Bacon: "Neither do I think ourselves yet learned or wise enough to wish reasonably; for as it asks some knowledge to demand a question not impertinent, so it asks some sense to make a wish not absurd."

Acknowledgment.

Thanks are due to our friend, Thomas A. Elder, M. D., of Mifflintown, Penn., for early copies of papers containing the proceedings of the American Medical Association.

Graduates of Medical Colleges for 1870,

Corrected from the *New York Medical Journal* of May, 1870:

Jefferson Medical College, Philadelphia	163
Bellevue Hospital Medical College, New York	140
Rush Medical College, Chicago	131
University of Pennsylvania, Philadelphia	113
University of Louisville, Ky	92
College of Physicians and Surgeons, N. Y	70
University Medical College, New York	62
Nashville Medical College, Tenn	58
Washington University, Baltimore	48
Buffalo Medical College, New York	41
Massachusetts Medical College, Boston	39
Miami Medical College, Cincinnati	37
Albany Medical College, New York	28
Starling Medical College, Columbus, O	24
Chicago Medical College, Illinois	20
Toland Medical College, San Francisco	9

Convention Proceedings.

CONVENTION OF MEDICAL TEACHERS.

[We are indebted to the *Philadelphia Reporter* for the following account, which the interest felt by various persons in the subject induces us to insert, although it is little more than a point in chronology.—Ed.]

The delegates from the various medical colleges of the United States assembled in convention on Friday, April 29, in the hall, corner of Tenth and E streets, Washington, D. C.

The object of the convention is to consider the improvements that may be suggested for the system of medical education.

Profs. Bemiss, Stillé, and Moore, were appointed a committee on credentials.

The examination of credentials occupied some time, and it was found that the representation was as follows: New Orleans School of Medicine, Samuel Logan; Howard University, D. C., Robert Reyburn and Silas Loomis; University of South Carolina, A. A. Talley, John T. Darby; Detroit Medical College, E. W. Jenks; Missouri Medical College, J. S. Moore; Chicago Medical College, N. S. Davis; Medical Department Georgetown College, J. H. Thompson; Willamette University, Oregon, Horace Carpenter; University of Louisiana, S. M. Bemiss; Jefferson Medical College, Philadelphia, S. D. Gross; University of Pennsylvania, F. G. Smith, Alfred Stillé; St. Louis Medical College, J. B. Johnson; Washington University of Baltimore, Charles W. Chancellor; University of Louisville, David W. Yandell.

Profs. Cox, Smith, Yandell, Logan, and Davis, were then appointed a committee to nominate officers.

The committee, after a short absence, reported the following named gentlemen, who were unanimously chosen to fill the offices for which they were designated by the committee:

President—S. D. Gross, of Philadelphia.
Vice President—D. W. Yandell, of Kentucky.
Secretary—N. S. Davis, of Chicago, Illinois.

The minutes of the last convention held at New Orleans were read, and the report of the committee of that convention made the basis for the action of this.

The convention then adjourned till 10 A. M., April 30th.

Additional credentials were presented as follows: Kansas City Medical College, John M. Forrest, A. P. Larkford; Missouri Medical College, A. Hammer; University of Nashville, W. K. Bowling and W. F. Briggs.

Professor N. S. Davis offered several rules for governing the proceedings, which were adopted.

Dr. Davis offered a resolution that the several propositions adopted by the Convention at Cincinnati, in 1867, be taken up separately in the order in which they stand in the printed report. Adopted.

The first proposition taken up is as follows:

First. That every student applying for matriculation in a medical college shall be required to show, either by satisfactory certificate or by direct examination by a committee of the faculty, that he possesses a knowledge of the common English branches of education, including the first series of mathematics, the elements of the natural sciences, and sufficient knowledge of Latin and Greek to understand the technical terms of the profession, and that the certificate presented (of the result of the examination thus required) be regularly filed as a part of the records of each medical college.

Professor Logan offered an amendatory resolution that recommendations to the different faculties of the medical colleges are not binding until ratified by the several institutions.

After some discussion the resolution was lost.

Professor Moore, of St. Louis, moved to strike out all after the words "common education," and said that in institutions not represented here the recommendations would be impossible, and he thought the tendency in the Western institutions would be to close them up. We exclude men from our colleges simply because they are not classical scholars. This was wrong, as in many instances our best physicians are without a classical education.

Considerable discussion ensued, in which Professors Yandell, of Kentucky; Hammer, Davis, Moore, Cox, Loomis, Stillé, and Reyburn, took part.

Professor Hammer moved an amendment to the amendment offered by Dr. Moore, to the effect that the words relating to the Latin and Greek languages be stricken out, and all else retained.

Professor Yandell offered resolutions as a substitute, which, after a protracted debate, were rejected. The amendment to the amendment was withdrawn, and the question recurred on the original resolution, which was debated at length, when a vote was taken and adopted, reconsidering the vote by which Professor Stillé's substitute was lost.

A motion was made to adopt the substitute, when debate again occurred.

Professor Davis advocated the adoption of the substitute, saying that he promised, if the schools of Boston, New York, and Philadelphia, would adopt the recommendations, and put them into operation, that the whole West would follow suit at once. (Great applause.)

The substitute of Professor Stillé was then adopted as a substitute for all the propositions before the convention. It is to the effect, "that the propositions adopted in 1867 by the convention of delegates from medical colleges, embodying a system of collegiate medical education, are in the highest degree commendable, and if they could be generally carried into effect would tend to elevate the medical profession. That the requirements for the degree of Doctor of Medicine must be practically determined by each medical college for itself, by the average attainments of its students, and by other considerations of which it alone can judge, and that, consequently, while abstaining from all attempts at dictation, this convention reiterates in the strongest manner its desire that the several medical colleges will, in the changes from time to time made by them in the curriculum of study, endeavor to conform them to the general plan which was recommended by the convention of 1867, and adopted in the same year by the American Medical Association."

The National Convention of Medical Colleges passed the preamble and resolutions offered by Professor Logan, setting forth that as this convention has failed to secure the assent of the majority of the regular medical colleges of the United States to the sys-

tem of improvement in medical education recommended at its last session, and as it is the opinion of this convention that the best means by which a judicious system of gradual improvement in medical education can be inaugurated by the medical colleges of this country will be found in the associated action of such colleges as will unite for that purpose,

Resolved, First. That a committee of nine be appointed, whose duty it shall be to communicate with the faculties of the medical colleges in the United States, with the view to ascertain how many and which may be willing to become members of an association of medical colleges, having for its prime object the improvement of medical education.

Second. That the chairman of said committee be instructed, as soon as he shall have received affirmative replies from the regular colleges, to inform each faculty so consenting of the fact, and to request that each faculty elect one or more delegates to the convention on the Friday before the day appointed for the meeting of the American Medical Association in 1871, and at the place of meeting chosen by that body, said delegates to be fully authorized to pledge their respective faculties to whatever definite plans of improvement in medical education may be adopted by the body in convention.

Third. It is hereby recommended that said delegates organize themselves, in behalf of their respective institutions, into a permanent association of medical colleges for the above mentioned object, and with the view of cooperating with the American Medical Association and the profession at large to accomplish so desirable an end.

Fourth. That Professor N. S. Davis, the chairman of the committee appointed by this body at its last session to communicate with the medical colleges on the same subject, be made chairman of this committee, and that the committee be authorized to fill any vacancies which may occur in its ranks.

The chair appointed the following as the Committee: Professor N. S. Davis, of Illinois; Samuel Logan, of New Orleans; A. Hammer, of St. Louis; T. Parvin, of Louisville, S. D. Gross, of Philadelphia; G. C. Blackman, of Cincinnati; G. G. Shattuck, of Boston, and A. C. Post, of New York.

The Convention adjourned *sine die*.

THE ILLINOIS STATE MEDICAL SOCIETY.

FIRST DAY—MORNING SESSION.

DIXON, ILL., May 17.

The State Medical Convention held its opening session in the court-house, of this city, on yesterday morning. The meeting was called to order at 10:30 A. M., Dr. G. W. Albin, of Mayo, First Vice-President, in the chair.

Dr. O. M. Everett, chairman of the committee of arrangements, welcomed the convention to the hospitalities of the profession and people of Dixon.

Dr. J. C. Corbus, secretary of the committee of arrangements, read the following list of delegates as present, with the proper credentials: Profs. N. S. Davis and R. N. Isham, Chicago Medical College; Drs. Chas. M. Morse and M. A. McClelland, Military Tract Medical Association; Drs. James Murphy, G. H. Johnson, and James L. Hamilton, Peoria Medical Association; Dr. David Prince, Morgan County Medical Association; Drs. R. G. Bogue and E. L. Holmes, Chicago Medical Society; D. J. Crist, Bloomington Medical Society; Drs. G. W. Phillips and G. W. Havitt, Lee County Medical Society; Dr. G. W. Albin, permanent member from Neoga; E. R. Willard, from De Witt county; R. S. Willard, from Vandalia, Fayette county; Dr. Saml. J. Jones, St. Luke's hospital, Chicago; Dr. Jas. S. Whitmire, permanent member from Metamora; Drs. E. P. Cooke and J. C. Corbus, Union Medico-Pathological Society, from La Salle and adjoining counties; Drs. Chas. Hunt and O. M. Everett, permanent members from Dixon; Dr. M. M. Robins, Fox River Valley Medical Association; Drs. G. L. Monnee and Leland, Medico-Pathological Society of La Salle and adjoining counties; Dr. Edwin Powell, of Rush Medical College; Dr. D. M. Young, Fox River Valley Medical Association; Dr. Samuel C. Plumma, Iowa and Illinois Central District Medical Association; Drs. John P. McClanahan and W. S. Sterling, of the Military Tract Medical Society; Dr. D. E. Foote, permanent member from Belvidere; Dr. D. M. Vosburg, of Earlville.

The following named gentlemen were unanimously elected as members of the State Medical Society: Dr. D. A. Sheffield, of Appleton; Dr. R. W. Shaw, of Ashton; Drs. E. P. Leavors and J. R. Felker, of Amboy; Drs. C. C. Satuner and W. Cohely, of Princeton; also, Drs. Henry E. Payne, D. W. Lowe, G. R. Bradwell, and Charles McAllister.

The reports of standing committees were then called for, and the following reports read by the chairmen of the respective committees: "Drugs and Medicines," "Ophthalmology," "Plaster of Paris in Fractures," and "Otology." They were all referred to the committee on publication.

On motion of Dr. Davis, the annual dues were fixed at $3.

The convention then adjourned till 2 P. M.

AFTERNOON SESSION.

The meeting was called to order at 2 o'clock P. M., Dr. Albin in the chair.

Dr. Everett introduced to the convention, Col. Dement, the mayor of this city, who welcomed them in a neat and appropriate speech, and extended to them the hospitalities of the city. Dr. J. S. Whitmire read a supplementary report on practical medicine, which was referred to the committee on publication, and, as calls for other reports from standing committees were not responded to, the society resolved itself into a committee of the whole on general discussion.

The subject of scarlatina and other contagious diseases was taken up, and the rest of the afternoon devoted to its discussion.

At 6 o'clock the convention adjourned till 8 P. M.

EVENING SESSION.

The convention was called to order at 8 P. M., Dr. Albin in the chair.

The following gentlemen were elected as Permanent Secretaries: Drs. W. Walton, of Ridout, and Thos. Winston, of Foreston.

On motion of Dr. N. S. Davis, Dr. Walton and Dr. W. H. C. Donaldson were placed on the nominating committee to represent Stephenson and Whiteside counties.

The order of business for the evening was then declared to be the discussion of carbolic acid in treating suppurating wounds. Dr. N. S. Davis said it would be important to bring out facts relating to the injurious effects of this treatment, if such could be established. Dr. Young, of Aurora, called on Dr. Bogue, of Chicago, to give his views, who gave way to Prof. Isham. Dr. Isham did not express full faith in carbolic acid. In wounds which were to be cured by primary intention, carbolic acid did not answer the purpose. Where there was coagulation there must be liquefaction, before a course of convalescence could occur. Carbolic acid seemed to be useless in lacerated wounds, attended with compound fractures. Carbolic acid was sometimes very useful as an antiseptic. But another remedy was still more efficacious, namely, a solution of iodine in chloroform. This arrested the course of suppuration. The modifying influences of carbolic acid were confined to its antiseptic qualities.

Dr. Bogue said his experience had not been favorable to carbolic acid. He would never use it with a recent wound. It had no beneficial influence on flaps or stumps, and in lacerated wounds the use of carbolic acid, in his judgment, was no more beneficial than in incised wounds. This remedial agent had had an extensive trial in Chicago hospitals, and had been, in general, a failure. He simply used it as a covering over the dressing. Next to the wound its antiseptic qualities would recommend it simply as an outside covering, not that its contact with the wound would be of any benefit. Its application to stumps, in many cases, had so shriveled the flesh that granulation and cicatrization could not take place. In some cases of large suppurating cavities it might yield some advantage. As to any poisonous effects, as producing pyæmia and the like results, he could give no facts from his own experience.

Dr. Young, of Aurora, said his experience verified that of Drs. Bogue and Isham. He thought he had remarked two cases of blood poisoning, which were aggravated by the direct application of carbolic acid to the wound. In one case that of a man who had his foot crushed by a railroad accident, abscesses formed rapidly in different parts of the body, without any direct swelling of the foot. He feared that the carbolic acid had something to do in contributing to this result.

Dr. Prince, of Jacksonville, thought that the application of carbolic acid resulted unfavorably because it was used in too great strength. The point to be ascertained was, how great strength would kill the animal or vegetable

parasites, and yet not injure the patient. The fact that a part shriveled under its application only proved that the solution was too strong. He used only three or four grains of the crystals to an ounce of water. The hypothesis was that suppuration was aggravated by pus. In a pure state, carbolic acid would arrest the putrefaction, and so far operate to prevent absorption of the poison into the system.

When primary intention was not sought for, but granulation, as following the ordinary organic course of suppuration in the wound, he believed carbolic acid, in a proper degree of strength, would be beneficial, as tending to destroy any vegetable spores which might have settled in the wound. He used chloride of zinc, glycerine, and carbolic acid, mixed together in nearly equal proportions, over the isinglass dressing. He believed that no remedy would have more beneficial results as thus applied. The doctor illustrated his views at considerable length, by examples from his own practice. The remedy was also beneficial, oftentimes, in obstetric practice. There was frequently a laceration of the vagina or uterus, or a lodgment of clotted blood, whose putrefaction would certainly aggravate the danger to the patient. In puerperal fever and in certain inflammations of the throat, he had found the use of carbolic acid highly gratifying in its success. He could not but be enthusiastic in favor of this remedy, as his own use of it had been so uniformly successful.

Dr. John Murphy, of Peoria, said that one of the most remarkable facts connected with the profession was the different results of the same remedies at the hands of different physicians. He regarded carbolic acid as invaluable in the case of recent wounds, in preventing suppuration, or keeping it within healthy bounds. His way of application was by means of sutures not tightly drawn, which gave ample chance for the carbolic acid lotion to be absorbed.

Dr. Isham thought that sometimes enthusiasm for a new dressing caused practitioners to lose sight of principles. He proceeded to argue that chemical decomposition was the logical result of the use of carbolic acid. In ordinary cases, where the system of the patient was healthy, it was not beneficial, but where the system of the patient was vitiated by organic disease, and suppuration in the wound was created with great rapidity, it might be possible that some benefit would be derived. He had no confidence whatever in carbolic acid in wounds which were in process of cure by primary intention.

Dr. Whitmire, of Metamora, contended, in relation to the assertion that carbolic acid was a poison, that there were no absolute poisons in nature, but only relatively so. The use of carbolic acid, as advocated by its friends, was not poisonous, but highly beneficial.

Dr. N. S. Davis thought that carbolic acid was going through the history of all valuable remedies. It had been used to excess in many cases, and was, therefore, regarded by too many now as valueless. If used with moderation and skill, he believed that it could be used to advantage. In clean wounds, through a healthy tissue, he did not believe any application was

beneficial; but in the case of badly suppurated wounds he had much confidence in carbolic acid. When the violence of extreme opinions had subsided on the question of carbolic acid, he felt it would be regarded as a valuable addition to the pharmacopœia. In cases of its medicinal use internally, it had been fortunate in some cases. In a case of morbid sensitiveness of the mucous membrane of the stomach, to enable the latter to bear food, he had found it of much use. Dr. Davis proceeded to describe several instances of a highly interesting nature illustrative of its successful internal use. In cancerous diseases of his experience, he had found the judicious use of carbolic acid very important as effecting relief, and sometimes marked benefit. It was given internally, and also used as a local application; but he had not used it as an injection. He believed it to be a very potent agent in holding such malignant diseases at bay, although he could not say that he regarded it as a complete cure.

After a brief further discussion on this question, the convention adjourned till 9 A. M., to-morrow.

SECOND DAY—MORNING SESSION.

DIXON, Ill., May 18.

The Illinois State Medical Convention held their second day's session on this morning, opening at 9 o'clock. Dr. G. W. Albin in the chair.

The following committees were appointed for the succeeding year:

Surgery—Prof. E. Andrews, of Chicago, chairman; Drs. D. Prince, of Jacksonville, and Webster, of Metamora.

Obstetrics—Dr. DeLaskie Miller, of Chicago, chairman; Drs. John P. McClenahan, of Norwood, and O. Everts, of Dixon.

Drugs and Medicines—Prof. N. S. Davis, of Chicago, chairman; Drs. B. Griffith, of Springfield, and E. Ingalls, of Chicago.

Criminal Abortions—Dr. W. H. Byford, of Chicago, chairman; Drs. Chas. Hunt, of Dixon, and Foote, of Belvidere.

Ophthalmology—Dr. Roman, of Springfield, chairman; Drs. Johnson, of Peoria, and Holmes, of Chicago.

Pulmonary Phthisis—Dr. S. W. Noble, of Bloomington, chairman; Drs. Law, of Dixon, and J. Adams Allen, of Chicago.

Otology—Prof. Isham, of Chicago, chairman; Drs. Winson, of Foreston, and I. F. Frazier, of Fayette county.

The following committees were appointed: On Intestinal Affections, Dr. I. D. Fitch, of Chicago; On the Duties of Society to the Profession, Dr. J. S. Whitmire, of Metamora; On Gleet, Dr. R. F. Higgins, of Vandalia; On Diabetes, Dr. W. D. Stirling, of Warren county; On Results in Fractures, Dr. L. W. Phillips, of Dixon; On Arrangements, Drs. Robert Baul, of Peoria, J. L. Hamilton, of Peoria, Roskoten, of Peoria, S. Maus, of Pekin, and Whitmire, of Metamora.

The following resolution was passed, on motion of Dr. Whitmire, of Metamora:

"*Resolved*, That it is the duty of the Legislature of the State to make such legal provisions as to insure persons who have committed capital crimes, and are acquitted of the same on the plea of insanity, being sent to the lunatic asylum as dangerous members of the community, and that a committee be appointed to procure such action."

The reading of the minutes was dispensed with till the evening session, and the convention proceeded to the regular business.

The following additional names as delegates and permanent members were reported: Professors E. Andrews and H. A. Johnson, of Mercy Hospital, Chicago, and Prof. E. Ingalls, of Rush Medical College, Chicago.

Dr. J. H. Hollister, Treasurer, then presented his annual report, which was substantially as follows:

To balance in the treasury, May, 1869	$ 86.00
Dues paid by 60 of the members at annual meeting in Chicago	240.00
Received by mail from correspondence	80.00
Total	$406.00
Paid out for publishing Transactions of the Society	199.06
Balance on hand	$206.94

Dr. Samuel J. Jones, of Chicago, then made a report on otology, which was, in substance, as follows: In view of the fact that no special report had ever been made on this subject, a cursory view would be given of its history. Instruments had been invented, within twenty-five years, which made the observations of the physician in diagnosis certain and reliable. Until recently, diseases of the ear had claimed but little interest or examination. Sir William Wylde, of Dublin, and Dr. Toynbee, of London, were the first who gave special and successful attention to aural diseases. Germany followed the example of England, and, with that patient research which characterizes her scientific men, she soon made gigantic advances in the science of otology. Inventive genius, when attention was turned to the subject, rapidly provided the lacking instruments. The Doctor here entered into a detailed description of the various instruments which were now in use among aurists, and also gave a list of the best and reliable works on the subject. There were two otological societies—the American and the German societies—which held regular annual meetings. The practical work accomplished had been very great. Many diseases, which formerly had baffled the physician, were now quite within his control.

Dr. Jones concluded with an elaborate and minute description of the principal diseases of the ear.

The report was referred to the committee on publication.

Prof. Holmes, of Chicago, presented a supplementary statistical report on otology. He said that this subject was left mostly to the practice of specialists. The time of preparation for general practice was so short, that few

physicians were willing to give an opinion on severe and obscure diseases of the ear. About one-twelfth of the diseases treated by medicine were diseases of the eye, and the cases of diseases of the ear about one-fifth of those of the eye. During his twelve years of practice in Chicago, he had 9,006 cases of diseases of the eye, and 1,735 cases of diseases of the ear. Of the latter, 1,078 had been treated in hospital practice, and 678 in private. The number of cases under each special classification was given. Dr. Holmes closed his report with a warning to the profession against the use of the nasal douche in case of catarrhal affections of the ear, unless with great care. It should not be so far elevated as to cause a great pressure on the middle chamber of the ear, as thereby inflammation would be produced and the hearing seriously impaired.

Dr. Johnson, of Peoria, cautioned the profession against the use of the instrument known as the "eye sharpener," which has been extensively advertised as a remedy for near-sightedness. He had known cases where the lens of the eye was dislocated, and great extravasation of blood effected through this cause.

Several members of the convention also expressed their objections to the nasal douche on the same grounds as have already been mentioned, giving illustrations of the danger from their own practice.

The additional report of Dr. Holmes was referred to the committee on publication.

Prof. N. S. Davis, of Chicago, presented the preamble and resolutions adopted by the American Medical Association in May, 1869, as follows:

"*Whereas*, The history of medical legislation in the various States of this Union clearly shows that no reliance can be placed on either the uniformity or the permanency of any laws relating to the practice of medicine; and

"*Whereas*, The results of all the efforts made during the last twenty-five years to elevate the standard of medical education through concert of action among the numerous medical colleges of this country, have proved, with equal clearness, that such concert of action, in an efficient manner, is unattainable; therefore, be it

"*Resolved*, That whatever is done to establish and maintain a just and fair standard of medical education throughout our whole country must be done by the profession itself, through its own voluntary organizations, in the same manner that it now establishes and enforces its code of ethics. The profession is as competent to declare, through its representatives in the national, state and local societies, what shall be the standard of attainments for those to be recognized and admitted into its ranks, and to establish the boards or agencies by which compliance with such standard shall be ascertained, as it is to declare what shall be the ethical rules governing the conduct of those already admitted.

"*Resolved*, That this association earnestly request each state medical society to appoint annually one or more boards of examiners, composed of five thoroughly competent members, whose duty it shall be to meet, at suitable times and places, for the examination of all persons, whether graduates of colleges or not, who propose to enter upon the practice of medicine in their respective States, except such as have been previously examined and licensed by a similar board, in some other State.

"*Resolved*, That each state medical society be requested to require its exam-

ining board, or boards, to exact of every applicant, on examination, adequate proof that he has a proper general education; is twenty-one years of age, and has pursued the study of medicine three full years, one-half of which time shall have been in some regularly organized medical college, whose curriculum embraces adequate facilities for didactic, demonstrative, and hospital clinical instruction.

"*Resolved*, That each state medical society be requested to act on the foregoing propositions, at the next regular annual meeting after the reception of copies of the same, and if approved by the state medical societies of two-thirds of the states, this association shall deny representatives from all organizations who longer refuse to comply with the same, and shall recommend the state societies to do the same, and all persons who, after that date, seek to enter upon the practice of medicine without first receiving a license from the state board of examiners, shall be treated ethically as irregular practitioners.

"*Resolved*, That in adopting the foregoing resolutions, by which it is proposed to treat the medical college diploma the same as the diploma of any literary college, this association is actuated by no desire to injure the medical schools of our country. On the contrary, by the adoption of the fourth resolution at the same time that the value of the mere college diploma is practically nullified, it is the desire, and confident expectation, that those institutions will be greatly benefited; because they will be forced to rival each other in the extent and efficiency of their courses of instruction, instead of the number of diplomas which they can annually distribute.

Dr. Davis said the matter was one of great importance in the profession. The facts asserted in the preamble showed a great discord and want of harmony between the different colleges in various states, and that the state laws on the subject were entirely incomplete. Reform had been persistently urged by the American Medical Association in four several meetings. A uniform plan of medical education had been unanimously adopted by the American Medical Association, but it had remained a dead letter. The state of medical education in this country was exceptional, as no other profession contented itself with such fragmentary and imperfect *curricula* of study. Schools of medicine should be organized for instruction and culture exclusively, and not merely as rivals who were competing to attach the title of M. D. to as many as possible, without violating all the canons of educational respectability. Dr. Davis recommended most urgently that the state society should take official action sustaining the action of the American Medical Association. He proposed the following resolutions:

"*Resolved*, That this society cordially approves the propositions contained in the resolutions received from the American Medical Association.

"*Resolved*, That this society approves of the standard of preliminary education agreed upon by the convention of delegates for medical colleges in Cincinnati, in 1867, and approved by the convention in Washington, in May, 1870, except so much as relates to Greek and Latin; and that it is the duty of every state and local medical society to appoint annually a board of canons, whose duty it shall be to examine all who propose to enter upon the study of medicine in their respective districts, and to give a requisite certificate of qualifications; and further, where such board exists it shall be regarded a violation of the ethics of the profession for any practitioner to receive a student into his office before he has received a satisfactory certificate from such board."

Prof. Ingalls, of Rush Medical College, opposed the passage of the resolutions at considerable length, on the ground that such union was impracticable and undesirable. The requirements of the different states demanded a different specialty of culture oftentimes. A firebrand would be introduced by the passage of these resolutions, that would cause infinite mischief; and he offered the following resolutions in place of the former:

"*Resolved*, That we acknowledge with gratitude and pride the advance the medical profession has made, and is continually making, in knowledge and scientific attainments, and that practical skill which enables its practitioners to combat disease and soothe the sufferings of the sick; and as far as we are able we will discard all personal feelings, and give our approbation and support to such colleges as impart the most thorough, extensive, and earnest teaching."

Dr. Young, of Aurora, attacked the action of the American Medical Association with great virulence, charging upon it that the members had been actuated by unworthy motives. He instanced the fact that colored members had been excluded from its deliberations. He thought that the reform could only be carried out by making a change in the fundamental law, and incorporating the provision in the state and national constitutions. To pass the proposed resolutions merely, would accomplish actually nothing.

Dr. Whitmire, of Metamora, thought the discussion was out of order, as the report of the committee was before the house for action. After remarks by Dr. Davis the question was called, and the report of Dr. Davis was received and referred to the committee for publication.

The committee on nominations made their report, and Peoria was appointed as the next place of meeting.

The following officers were elected for the ensuing year: President, Dr. G. W. Albin, of Neoga; First Vice-President, Dr. John Murphy, of Peoria; Second Vice-President, Dr. J. S. Whitmire, of Metamora; Permanent Secretary, Dr. T. D. Fitch, of Chicago; Assistant Secretary, Dr. J. R. Johnson, of Peoria; Treasurer, Dr. J. H. Hollister, of Chicago. The convention then adjourned till 7 o'clock P. M.

The afternoon was devoted to a delightful excursion and picnic, tendered by the citizens of Dixon, and held on the beautiful ground of Gov. Charters. The seat of Mr. Charters, located on a commanding bluff of the Rock river, about three miles from the town, was thrown open, both house and grounds, to the guests of the city, and a most generous hospitality lavished. A quadrille band was in attendance, and the afternoon was most agreeably spent in the various amusements in vogue on such occasions.

EVENING SESSION.

The evening session was called to order at 7 o'clock, Dr. Albin in the chair.

The following named gentlemen were proposed as permanent members: Drs. W. M. Maul, of Limerick, Bureau county, and J. K. Lewing, of Dover, Bureau county.

Prof. Ingalls, of Rush Medical College, made a brief volunteer report on scarlet fever. Scarlet fever was one of the most fatal in the list of diseases. More than 500 children in the last year, in Chicago, had perished under its ravages. The nature of the cause of scarlet fever he believed to be an organized poisonous germ of some sort not fully known, but resulting in a process of fermentation in the blood. Nothing but an organism would produce its like. This was the case with scarlet fever, so it must be the result of the same living germ. Sometimes atmospheric causes might produce it spontaneously, but in the majority of cases it was by infection. Having thus originated once, the disease was infinitely reproduced. The severity of the reproduction depended on the character of the original germ. In some cases it was severe and virulent, while sometimes mild. As to prevention, the problem had been greatly overlooked by physicians. Many men were ignorant of the fact that scarlet fever was contagious. This ignorance was unpardonable. Much of the extent of the disease was due to this ignorance. Every case should quarantined. It was better and easier to prevent the disease than to cure it. Another means of prevention was ventilation, which diluted the germ, and prevented, to a large extent, its fatal effects. Another means was that of disinfection—an agency not fully appreciated by medical men. The discharge, the air, and the clothing should be thoroughly disinfected. He briefly discussed the cure of the disease. All that was claimed for the cure of scarlet fever was the conduct of it to a safe issue. It could not be checked prematurely. He had no confidence in any special medicine. Oxygen set free in the blood was the best. He preferred chlorate of potash, as modifying the course of the disease. He did not believe in mercurials in any shape. They did positive injury. Cases should not be much purged. If laxatives were used, they should be of the most gentle nature. He would not elaborate much now in regard to the remedies, but would give a full expression of his views in his formal written report for publication.

Dr. Young, of Aurora, differed from Prof. Ingalls. He believed in an active, heroic treatment of this disease.

Prof. Davis thought, as the subject had been discussed, the paper of Dr. Ingalls should be referred to the committee on publication. The motion was carried.

Prof. Powell, of Chicago, gave a brief report of a case of amputation of the hip. He detailed the history of the patient as relating to the disease. The case was treated by perfect rest and warm fomentations of the knee and hip during the incipient stage. An injury received by a fall aggravated the disease, and finally amputation became necessary. When the operation was performed, the patient was nearly skin and bone, emaciated to the last degree. After the operation was performed, the patient was so exhausted that he only breathed four times a minute. That patient was still living, and was now in a fair way of convalescence in the hospital. The point of interest was the propriety of performing the operation of amputation at the

hip-joint in case of caries of the bone. The report was referred to the committee on publication.

The committee on nominations made a further report, as follows: Committee on Criminal Insanity, Drs. A. McFarland, of Jacksonville, J. S. Whitmire, of Metamora, and R. J. Patterson, of Jacksonville; Idiocy, Drs. C. K. Wilbur, of Jacksonville, J. R. Eillane, of Jacksonville, and Harrison Noble, of Heyworth; the Medical Use of Carbolic Acid, Drs. D. C. Law, of Dixon, and John Murphy, of Peoria; Cholera Infantum, Dr. D. W. Young, of Aurora; Membranous Croup, Dr. David Prince, of Jacksonville.

The following were appointed as delegates to the medical societies of adjoining States: Iowa, S. C. Plumba, W. D. Sterling; Missouri, P. Cook, S. P. Breed; Indiana, W. H. Byford, J. P. Ross; Wisconsin, W. C. Lyman, D. C. Foot; Kansas, G. W. Phillips, J. M. Moore, J. S. Whitmire; Ohio, Dr. Chas. Hunt.

The following members were elected as delegates to the National Association: Drs. N. S. Davis, of Chicago; J. O. Hamilton, of Jerseyville; A. W. Young, of Aurora; S. J. Jones, of Chicago; E. Ingalls, of Chicago; R. J. Higgins, of Vandalia; —— Johnson, of Peoria; E. Powell, of Chicago; R. Isham, of Chicago; W. W. Winn, of Dixon; H. A. Johnson, of Chicago; G. J. Monroe, of Leland; J. S. Whitmire, of Metamora: Moses Gunn, of Chicago; D. J. Crist, of Bloomington; M. M. Robbins, of Aurora; M. W. Walton, of Ridout; C. G. Amity, of Chicago; J. M. Morse, of Galesburg; J. M. Ainsley, of Galesburg; J. P. McClanahan, of Galesburg; G. W. Heath, of Franklin Grove; and E. P. Cook, of Mendota.

On motion of Dr. Young, the thanks of the society were voted to the mayor, common council, and citizens of Dixon, for the magnificent reception accorded them.

The resolutions offered by Prof. Ingalls in the morning were, by a vote of the society, appended to the report of Prof. Davis.

On motion of D. P. Cook, of Mendota, it was resolved that a committee should be appointed to urge upon the legislature the necessity of an official registration of births, marriages, and deaths, for the State, and that Dr. Rauch, of Chicago, should be the chairman of the committee. Dr. David Prince, of Jacksonville, and H. A. Johnson, of Chicago, were appointed as his associates.

On motion of Dr. Samuel Jones, of Chicago, it was voted that a unanimous vote of thanks should be given to the presiding officer of the society for the able manner in which he had discharged his duties.

Dr. Albin made a short speech, acknowledging the kindly feelings of the society. The society then adjourned till the third Tuesday in May of 1871.

INDIANA MEDICAL SOCIETY.

INDIANAPOLIS, Ind., May 18.

The Indiana Medical Society concluded its session to-day. All persons desiring to be members were requested to pay $2 before participating in the proceedings. Various papers were read upon medical questions. The following officers were elected: President, Dr. R. N. Todd; Vice President, J. N. Rosenthall, of Fort Wayne; Secretary, G. V. Woolen; Assistant Secretary, Dr. W. J. Elstun; Treasurer, J. H. Woodburn; Librarian, A. W. Davis. A committee of one from each congressional district was appointed to collect and collate facts relating to the health of their different localities, medical statistics, etc. Delegates to the American Medical Association were appointed. The next meeting of the society was fixed for the second Tuesday in June next. The President appointed the standing and special committees for the ensuing year. Adjourned.

TWENTY-FIRST ANNUAL CONVENTION OF THE AMERICAN MEDICAL ASSOCIATION.

FIRST DAY.

The twenty-first annual convention of the American Medical Association met in Lincoln Hall, Washington, on Tuesday, May 3rd.

At the last annual meeting of the association it was determined to hold their convention in Washington every alternate year, and at other places as may be agreed upon in convention. The last convention was held at New Orleans. The general meetings of the association are restricted to morning sessions, the afternoon sessions will be devoted to the hearing of reports, reading of papers, and their consideration in the following sections:

First—Chemistry and Materia Medica.

Second—Practical Medicine and Obstetrics.

Third—Surgery and Anatomy.

Fourth—Meteorological Medical Topography and Epidemic Diseases.

Fifth—Medical Jurisprudence, Hygiene and Physiology.

Sixth—Psychology.

Each section is to choose its own officers, and make its own rules of order.

The convention was called to order at 11 A. M., by the President, George Mendenhall, of Ohio; William B. Atkinson, of Philadelphia, Secretary.

Professor F. G. Smith, of Pennsylvania, L. A. Sayre, of New York, Warren Stone, of Louisiana, and J. S. Moore, Vice Presidents, took seats on the stage beside the President. The Ex-Presidents of the Society also took seats on the stage.

The Rev. Dr. Boynton then opened the convention with a fervent prayer.

The President then announced that the report of the Committee of Arrangements would be read.

Dr. Antisell, chairman of that committee, then delivered a speech of welcome, expressing himself as gratified in seeing so full a representation.

The reports of the old committees were made, and referred to the proper sections.

The committee then presented the following programme:

Programme for Evenings of May 3, 4 and 5.

Tuesday—Reception by the President of the United States, at 8 P. M.

Wednesday—Reception by the Surgeon General, at the Army Medical Museum, from 7 to 10 P. M.; surgical lecture, in the lower hall, at 8 P. M.; microscopical lecture, in the lower hall, at 8.45 P. M.

Thursday—Exhibition of the illumination of the Capitol dome, at 8 P. M.; reception by the Mayor of Washington, Hon. S. J. Bowen, at 9 P. M.

The Secretary then read the roll of membership.

The Committee on Credentials submitted a majority report, which excluded delegates from the National Medical Society of the District of Columbia, American Academy of Medicine of the District of Columbia, Howard University Medical College, Alumni Association of the medical department of Georgetown College; also, the three city hospitals, because they consult with colored physicians.

Dr. Robert Reyburn, chairman of the Committee on Credentials, submitted a minority report. He began by remarking that the committee had disgraced itself, and lowered itself to the level of a political caucus.

Dr. Davis, of Chicago, called the gentleman to order.

On motion, the report was accepted and referred to the Committee on Ethics, with instructions to report at their earliest convenience.

Dr. Tucker, of California, then moved that so much of the majority report as affected the minority report be referred to the Committee on Ethics.

Dr. Stewart, of the District of Columbia, then presented a protest to the majority report of the Committee on Credentials; which was also referred to the Committee on Ethics.

Dr. Busey, of the District of Columbia, presented a protest, signed by many physicians, against the admission of Dr. C. C. Cox, of Maryland, as a representative from that State; which was referred to the Committee on Ethics.

Dr. Davis, of Illinois, said if they, at this stage of the session gave members the right of discussion on non-important points, that there would be no time for business. He hoped, therefore, that no discussion would be allowed until the regular committees had reported.

Dr. Martin, of Massachusetts, said that as a majority of the delegates of Massachusetts had been excluded for some unexplained cause, he therefore moved that the subject be referred to the Committee on Ethics. It was so referred.

Dr. Davis moved that all questions pertaining to the right of institutions, hospitals, colleges and private persons, as to their admission into the convention, be all referred to the Committee on Ethics. The motion prevailed.

Dr. Davis then moved that the meeting proceed with the regular order of business. Carried.

A number of members were then accepted by invitation.

The reading of letters and telegrams from absent members was next in order

Dr. Lewis A. Sayre, chairman of the Committee on Ethics, and one of the vice presidents of the association, said a pamphlet had been published and circulated by one Dr. Ruppaner, and asked that the subject be referred to a special committee.

Dr. Davis moved that the chair appoint a new Committee on Ethics for the ensuing year, to which this subject might be referred. Carried.

The following gentlemen were appointed: Alfred Stille, New York; N. S. Davis, Illinois; J. N. Keller, Kentucky; H. P. Askew, Delaware; J. J. Woodward, U. S. Army.

The convention then took a recess of five minutes.

After the reassembling of the convention, the President read his annual address.

It was moved that the thanks of the association were due to the president for his able address, and that a copy be requested for publication. Carried.

The next business was the report of special committees and presentation of papers.

The committees for the year 1869 made their reports, and some of which were continued and others discharged.

Dr. T. Antisell, District of Columbia, then read a report on veterinary colleges, which was referred to the Committee on Printing.

A number of the members then proposed to change the place of meeting, as the acoustic properties of the hall were such, combined with its size, that it was impossible to hear what was going on.

The motion was withdrawn after some debate, in order that a number of papers might be referred to the proper committees.

The association, at 2 P. M., took a short recess for the purpose of choosing permanent State nominating officers.

After reassembling, the Chair announced the following gentlemen as Committee on Nominations: Alfred Stille, N. Y.; Dr. G. C. B. Nottingham, Mass.; H. F. Askew, Del.; H. Carpenter, Oregon; S. C. Busey, D. C.; J. A. Murphy, Ohio; C. M. Carleton, Conn.; E. W. Jenks, Mich.; J. Rea, Ind.; R. Z. Michel, Ala.; E. P. Lankford, Mo.; A. N. Talley, S. C.; J. E. Manlone, Tenn.; J. L. Atlee, Penn.; S. M. Beamis, La.; J. N. Keller, Ky.; J. J Cockrell, Md.; C. A. Lee, N. Y.; G. S. Palmer, Maine; F. J. Haywood, Jr., N. C.; G. C. McGregor, Texas; H. Nance, Ill.; —— Haxall, Va.: O. Bullock, R. I.; —— Barber, Iowa; A. B. Stuart, Minn.; M. Creeg, U. S. A.; —— Steinriede, Miss.; Dr. H. W. Brock, W. Va.

Dr. C. C. Cox, of Maryland, moved that the name of Dr. Busey, of the District of Columbia, be stricken out of the list of delegates until such time

as the Committee on Ethics should report relative to the District of Columbia.

Dr. Busey said that Dr. Cox was not a delegate from Maryland.

A vote being taken on the motion of Dr. Cox, it was lost.

There was much discussion on this subject, when it was moved that the delegates of the District of Columbia find a room in which to fight out their battles. [Laughter.]

The Secretary then announced that the nominating committee would meet in the prayer room at 4 P. M.

SECOND DAY.

The Convention was called to order at 9.30 on Wednesday morning by Prof. George Mendenhall, President; William B. Atkinson, Secretary.

On motion, the reading of the minutes was dispensed with.

Dr. Gross, of Philadelphia, said that it was his opinion that they should have a social reunion annually, to be held on the 3d day after the convening of the association. He therefore moved that the social reunion be held at the Arlington House this evening, at 8.30 P. M. Carried.

A committee of five was appointed to make arrangements for the social.

Dr. T. Antisell, of the District of Columbia, then read a list of members by invitation.

Dr. Alfred Stille, of the Committee on Medical Ethics, then read a partial report relative to the Massachusetts Medical Society, by which their delegates were admitted to seats in the Convention, and recommending them to eject from their society all who were not what is considered by the association as regular practitioners.

Dr. Beamis, on the part of the nominating committee, made a report of the number of States represented.

On motion, the paper read by Dr. Antisell on Tuesday was reconsidered.

Dr. —— offered a motion that the subject be referred to a committee of three; it was so ordered.

The Secretary read a paper charging Dr. C. C. Cox with a violation of the code of ethics; which was referred to the Committee on Ethics.

Dr. Cox endeavored to explain, but was forced to desist on account of the noise.

On motion, five minutes were given to Dr. Cox to make an explanation. He said that he had bought a license from the Medical Association of this city, but he had never received the said license; that was the reason why he was not a member of the Medical Society. And further, that he had never importuned any Senator on any subject whatever, as had been charged upon him.

Dr. Palmer asked leave to make an explanation, but the association would not hear him.

Dr. Davis, of Illinois, hoped that no discussion would be allowed.

Dr. Antisell reminded the association that they were to be entertained this evening by Mayor Bowen.

Dr. W. H. Mussey, of Ohio, then offered a resolution that the Committee on Ethics be instructed to meet and report immediately upon the subject of the admission of members now before them. Not approved.

Dr. Loomis, of Delaware, offered a resolution that all the members from the District of Columbia be admitted. He had been a member of a college that graduated negroes, and that was the reason why he was not admitted. The resolution was not concurred in.

Several members objected to any persons voting who were not members.

A division was called for, and the resolution of Dr. Loomis was lost by a vote of 107 yeas to 142 nays.

Dr. Cox, of Maryland, moved that no delegates from the District be admitted until the Committee on Ethics report. Carried.

Dr. Yandell, of Kentucky, moved that the Medical Society of the District of Columbia be blotted utterly out from the map of the Medical Association.

Dr. White, of New York, protested against any such motion, and moved that the motion be laid upon the table. Carried. [Confusion.]

Dr. F. G. Smith, of Pennsylvania, chairman of the Committee on Printing, made a report giving a detailed account of the work of the committee for the past year. The work, he thought, had been very satisfactory, and the committee deserved the thanks of the association. The report was received.

An amendment was made to the report, that all the matter hereafter ordered to be printed be stereotyped.

Dr. Gross, of Pennsylvania, made an amendment to the amendment, that the transactions of the association be published in an American medical journal, issued monthly.

Dr. White, of New York, called for a division.

Dr. Stewart moved a reconsideration. Carried.

After some further debate, the original report was received, and the amendment of Dr. Gross referred to a special committee of five. The whole was then referred to the special committee above named.

The Secretary then submitted the annual report of the Treasurer, which was referred to the Committee on Publication.

A communication was then read from the British Medical Association to Dr. Gross, complimenting the American Association upon its success. Referred to the Committee on Publication.

Dr. T. Antisell here arose to a question of privilege. He then read from a pamphlet, the subject of which had been taken from the *Chronicle* of Wednesday. He denounced the statements referred to as unfounded in fact, and objected to the circulation of any paper whatsoever, and particularly any of a political import, in the hall.

Dr. Davis, of Illinois, moved that hereafter all papers be excluded from the hall. Carried.

The regular business was then taken up.

Dr. R. Reyburn, of the District of Columbia, from the Committee on Library, then read the annual report of the Librarian. Received, and referred to the Committee on Publication, and the bills ordered to be paid.

Dr. Sayre, chairman of the Committee on Ethics for 1869, moved that all papers in the hands of the old committee be referred to the new committee, and the old committee be discharged.

Dr. T. Antisell, of the Committee of Arrangements, then made a report of the members who have arrived since the opening of the convention.

The Committee on Medical Literature (Dr. J. J. Woodward, United States army, chairman,) submitted a report, which was referred to the Committee on Publication.

Dr. Birch, of New York, moved that the motion of Dr. Gross, in reference to a supper to be given at the Arlington, be reconsidered. Carried and tabled.

Dr. C. C. Cox, chairman, submitted a report from the Committee on Medical Necrology. Referred to the Committee on Publication.

Dr. Moore, of Missouri, United States army, presented the following resolution:

"*Resolved*, That no medical man shall deliver an efficient course of lectures under a price to be decided by this association."

Dr. Moore said that the irregular practices of the Western colleges imperatively demanded some such action, to save the profession from disgrace, and if they adopted the resolution they would elevate the profession to its proper standard.

Dr. Davis, of Chicago, opposed the resolution. He thought it was impracticable for the association to fix a standard of charges for the medical colleges of the country. He did not wish the association to vote against the resolution; but he wanted appended to it a law, stating what should be considered the standard of work to be done for the money paid.

Dr. Moore, of Missouri, said his object was to fix a minimum price. Those colleges which had the grade might charge as much as they pleased. The doctor claimed that this course would promote competition, and would so elevate the standard of colleges, and make more uniform what is termed an efficient course of lectures.

Professor McNaughton, of New York, spoke against the resolution.

Dr. Selden moved that $100 be the sum named to fill the blank left in the resolution offered by Dr. Moore.

The motion was then put in the form of a resolution which excluded any or all delegates from colleges who received a less fee than $100.

An amendment was made, to include the Alumni of such institutions.

Dr. Yandell, of Kentucky, spoke to the resolution at length, opposing any fixed price as detrimental to the progress of the profession. He contended that circumstances altered cases, and prices also. Dr. Yandell then

touched upon the standard of education. He was in favor of English, but opposed to Latin and Greek requirements.

The remarks of Dr. Yandell were listened to with the greatest attention.

It was then moved that the resolution be laid on the table; which, after some further discussion, was so ordered.

Dr. Sullivan, of Massachusetts, moved that the action of this association should be made final for five years from this date.

Dr. Johnson, of Missouri, revived the question of stated fees, and spoke at some length in favor of the said fees being regulated by the American Association. They had tried a convention of colleges, that they might help themselves, but they would not do it. He therefore hoped that the association would take the matter into its own hands.

After some further discussion, the motion of Dr. Sullivan was laid on the table.

Dr. Collins, of Massachusetts, presented the following resolution: "That the charge for medical examination for life insurances should be not less than $5." Adopted.

Dr. Horner, of Virginia, introduced a resolution regulating physicians' fees. Rejected.

Dr. Sullivan, of Massachusetts, presented a resolution to the effect that the Medical Association have power to control medical education throughout the United States. Passed.

Dr. D. A. O'Donnelly, of Maryland, offered a resolution that a committee of three be appointed to report on the evil of abortion, in a proper light, to the society, and to consider some means whereby to expel all such as practiced abortion from the association. And further, denouncing in the most unqualified manner, all who indulged in this abominable practice. Passed.

The Committee on Nominations then reported the following named officers for the ensuing year:

President—Alfred Stille, Pennsylvania.

Vice-Presidents—J. S. Wetherly, Alabama; Henry Gibbons, California; J. T. Hurd, Texas; Samuel Willey, Minnesota.

Assistant Secretary—Dr. J. C. Tucker, of California.

Treasurer—Dr. Casper Wister, of Pennsylvania.

Librarian—Dr. F. A. Ashford District of Columbia.

Committee of Arrangements—Chairman, Dr. A. N. Sawyer; J. C. Tucker, Shurtleff, Holman, Murray, U. S. Army; Simmons, Cal.; Carpenter, Oregon; Morrison, Nevada.

Committee on Publication—Drs. F. G. Smith, Pennsylvania; W. B. Atkinson, Pennsylvania; J. C. Tucker, Cal.; F. A. Ashford, District of Columbia; Casper Wister, Pennsylvania; H. F. Askew, Delaware; William Mayberry, Pennsylvania.

Committee on Prize Essays—T. M. Logan, California, chairman; H. Gibbons, H. H. Toland, Beverly Cole, Cooper Lane, Cal.

Place of meeting, San Francisco, California.

Time of meeting, first Tuesday in May, 1871, at 11 A. M.

The report was received and adopted, and a resolution passed that its next place of meeting be at San Francisco, on the first Tuesday in May, 1871.

The Secretary presented a number of communications on various subjects, which, after reading, were referred to appropriate committees, with instructions to report at the next annual meeting.

Dr. Maddox inquired of the Chair what disposition had been made of the delegates from the District of Columbia, and asked information relative to their right to seats in the association.

The Chair informed him that all the delegates from the District of Columbia had been excluded.

Dr. Maddox then moved a reconsideration of the vote by which the District of Columbia delegates were excluded.

The motion was not considered, as the whole matter had been referred to the Committee on Medical Ethics.

The association then took up the consideration of the constitution, to which several amendments were proposed.

Before proceeding to vote on the constitutional amendments a resolution was offered which excluded from seats all delegates who had received appointments from permanent medical colleges, hospitals, lunatic asylums, and from the American Medical Society, at Paris, France; that those only should be admitted who had received their appointments from some society in good standing.

A motion was made to lay the resolution on the table.

It was also moved that members "by invitation" be excluded.

Considerable discussion ensued upon the resolution and the motion, when, on motion of Dr. Hibbird, the whole matter was postponed for further consideration.

Dr. Alfred Stille, of Pennsylvania, chairman of the Committee on Ethics, submitted a partial report, recommending that Dr. C. C. Cox be admitted as a delegate from Maryland, as the charges brought against him were too vague to receive the consideration of the committee.

Dr. Keller, of Kentucky, submitted a minority report from the Committee on Ethics, recommending that Dr. C. C. Cox should not have a seat as a representative from Maryland, as he was a resident of Washington; and moved its adoption.

After considerable discussion, the majority report was adopted.

The Secretary then read the titles of a number of papers for the consideration of the several sections; after which the Convention adjourned to 9 A. M.

VISIT TO THE MEDICAL MUSEUM.

In the evening the association met, according to programme, in the United States Army Medical Museum, on Tenth street. The entire association, members and delegates, were present, many of whom were accompanied by ladies. The early part of the evening was spent in examining the objects of interest in the museum, which was highly praised by the visitors.

At 8 o'clock the association adjourned to the lower hall, from which the desks had been removed and accommodations made for the comfort of those

present to listen to lectures from Drs. Otis and Woodward, of the United States Army.

Dr. George Otis was the first speaker. His lecture was on the Excision of Joints, from wounds, of which he exhibited many illustrations, in which the operations made had been successful and the patients recovered. The lecture of Dr. Otis was of great interest, and was listened to with much attention.

Dr. J. J. Woodward then followed with a lecture on "Electric Lights," in which he illustrated the power of the artificial lights over the sunlight for micro-photography. Dr. Woodward was frequently interrupted by applause, as the excellence of the illustrations impressed the audience.

After the lecture of Dr. Woodward the audience adjourned to the museum, where the examination of the specimens continued until a late hour.

It is proper to state in this connection that the Medical History of the late War, as prepared by Drs. Otis and Woodward, is nearly completed. The history, when completed, will be the largest ever compiled.

MINORITY REPORT OF THE COMMITTEE ON CREDENTIALS.

The following is the minority report of the Committee on Credentials, as read before the association at its opening session:

The undersigned respectfully protest against the admission to the approaching session of the American Medical Association of the delegates from the Medical Society of the District of Columbia, for the following reasons, viz.:

These delegates represent a society which, in open defiance of the ethics of the American Medical Association, for the fee of ten dollars, issues licenses to practice medicine in the District of Columbia to homœopathic and other irregular practitioners.

This society is also irregular, and violates the ethics of the American Medical Association by claiming and exercising the power to grant licenses to practice medicine in the District of Columbia to persons who are not graduates of any respectable medical college, for the fee of ten dollars.

The undersigned also respectfully protest against the admission to the next session of the American Medical Association, of the delegates from the so-called Medical Association of the District of Columbia, for the reason that said association is composed of the same individuals that form the Medical Society of the District of Columbia; in fact, it only settles the fee bill and local ethics of the medical profession of the district, and can in no sense be called a medical organization entitled to representation in the American Medical Association.

No medical papers essays, or pathological specimens are printed at its meetings, and it is in fact only an ingenious device by which the Medical Society of the District of Columbia is enabled to duplicate its number of delegates in the American Medical Association.

The undersigned also respectfully calls attention to the number of delegates claiming to represent the medical profession of the District of Columbia. The total number of regular physicians in the district is about two hundred, which would give about twenty delegates, and yet it will be seen that the District delegates number about sixty-four, which is evidently unfair, and gives the District a much larger representation than it is justly entitled to.

The undersigned, having already filed a written protest with the Committee on Credentials, for the reasons above given, respectfully recommends that the following gentlemen, delegates from the Medical Society of this city, be refused admission to the approaching session of the Association, viz.: R. K. Stone, T. Miller, J. C. Hall, G. W. Bulkley, A. B. Drinkard, W. G. Palmer, T. A. Ashford, W. W. Johnson, J. T. Young, S. C. Busey, J. M. Toner, W. P. Johnson, T. Antisell, C. E. Hagner, A. F. A. King, M. V. B. Bogan, W. H. Combs, D. W. Prentiss, and W. E. Roberts.

For reasons as above he respectfully recommends that seats also be refused in the approaching session of the association, to the following-named gentlemen, delegates from the so-called Medical Association of the District, viz.: C. H. Lieberman, D. K. Hagner, William Lee, J. C. Riley, Grafton Tyler, W. Butt, Joseph Walsh, N. S. Lincoln, J. W. H. Lovejoy, Thomas F. Maury, Louis Ritchie, W. H. G. Newman, Armsted Peter, H. B. Triste, Aaron Miller, and George R. Miller.

The undersigned reports favorably upon the credentials of, and recommend that seats be granted to, the following-named gentlemen, delegates representing the various societies and medical institutions of the District, viz.:

From the Alumni Society, Georgetown College—W. Evans, E. McNally, F. O. St. Clair, G. A. Fitch, R. S. L. Walsh, Charles Allen.

Columbia Hospital, Washington, D. C.—J. H. Thompson.

Georgetown College, D. C.—Johnson Elliott, Noble Young.

Section of Medicine and Hygiene, American Academy of Literature, Science, and Art—W. D. Stewart, D. W. Bliss, T. B. Hood, G. T. Johnson.

Small-pox Hospital, D. C.—A. T. Augusta.

Washington Asylum—S. H. McKim.

Freedmen's Hospital—Charles B. Purvis, B. G. Glennan.

Howard University Medical College, D. C.—S. L. Loomis, R. Reyburn.

National Medical Society, Washington, D. C.—H. W. Sawtelle, A. W. Tucker, J. E. Mason.

Clinopathological Society—H. A. Robbins, O. M. Muncaster.

National Medical College, D C.—A. Y. P. Garnett, J. F. Thompson.

Providence Hospital, D. C.—G. M. Dove, C. M. Ford.

The undersigned, in conclusion, respectfully protests against the arbitrary and illegal conduct of the majority of the members comprising the Committee on Credentials, in refusing credentials to delegates from medical institutions which have been heretofore represented in the American Medical Association, and apparently objecting to them solely on partisan and political grounds.

ROBERT REYBURN, M. D.,
Member of Committee on Credentials, American Medical Association.

THIRD DAY.

The convention was called to order at 9:30 A. M. President Mendenhall in the chair; William B. Atkinson, Secretary. The reading of the minutes was, on motion, dispensed with.

Dr. Antisell then read the names of a number of gentlemen who were admitted as members on invitation.

Dr. Sayre asked that a committee be appointed to examine the charges circulated against him through the country. He requested that a special committee be appointed, to report on the matter at this session.

Dr. —— said that there being a difficulty between Drs. Sayre and Ruppaner, he objected to any committee being appointed, because the other party was absent.

Dr. Murphy, of Ohio, moved that the whole matter be referred back to the society at New York.

Dr. Sayre said it was due to the association that these charges be looked into.

Dr. Murphy said that the reputation of Dr. Sayre was not damaged in this society, and he therefore insisted on his motion.

Dr. Keller, of Kentucky, reported on the part of the Committee on Ethics, that that committee had been forced by the press of work to return the papers in the case of Dr. Sayre for the further consideration of the association.

Dr. Maddox moved that the whole matter be laid on the table. It was so ordered.

Dr. Yandell then moved that the delegate that had been sent as a representative to the British Medical Association be heard.

Dr. Pinkney, United States Navy, representative of the American Association in England, made a long and interesting report of his visit, and observations on the medical schools of Britain. The report was listened to with much attention throughout.

A vote of thanks was tendered Dr. Pinkney, and the report referred to the Committee on Publication.

Dr. F. G. Smith, of Pennsylvania, chairman of the Committee on Nomenclature, submitted a report of the names of diseases, accompanied by a resolution recommending the adoption of the nomenclature of diseases prepared by the Royal College of Physicians at London.

Dr. Underhill, of New York, also read a paper on the same subject, which was laid on the table.

The resolution recommended by the committee was discussed at some length by Drs. McDaniels, of Alabama, Logan, of Louisiana, and others, who all held that revision of the nosological tables now in use was imperative.

The report, with resolution as recommended, was adopted.

Dr. C. C. Cox offered a resolution, which was adopted, for the appointment of a special committee to wait upon the Surgeon General of the United States, and to request the privilege of duplicating the photo-microscopic slides of the tissues so admirably executed by the indefatigable industry and skill of Surgeon J. J. Woodward, to be prepared under the direction of said committee, and distributed at a fair price to such medical colleges and institutions as may desire their use.

Dr. Beamis, of Louisiana, from the committee on nominations, reported the additional standing committees for the ensuing year, which report was adopted.

Dr. Antisell offered a resolution of thanks to the Surgeon General, United States Army, for the beautiful and instructive exhibition of last evening,

and recommending Dr. Woodward and Dr. Otis to the consideration of the Secretary of War as worthy of promotion for their efforts to advance medical education in the military service.

Dr. C. C. Cox then offered a resolution of condolence with the family of the late Alden March, of New York, and that a copy of the same be sent to Dr. Alden March's bereaved family. The resolution was concurred in.

Dr. Steine, of New York, offered a resolution that the State and county authorities be requested to aid in the support of veterinary colleges in in each of the States, by appropriations or otherwise. Adopted.

Also, that one or more veterinary surgeons be associated with other physicians in the boards of health when they are appointed by the Governors. Lost.

Also, that veterinary surgeons be appointed to the army, with the rank of full surgeons, and also in the Agricultural Department.

Dr Otis moved, as a substitute, that the first clause, relating to appointments of veterinary surgeons to the United States army, be stricken out, and that the government appoint a veterinary surgeon to the Agricultural Department, with a suitable salary. Adopted.

The hour for special business having arrived—

Dr Storn, of Boston, moved, upon behalf of the Gynæcological Society of that city, that the action of the association in 1869, condemnatory of cards by specialists in journals of a strictly medical character, should be rescinded, upon the ground of abstract right and long custom with reference to the insertion of such cards. Tabled.

A resolution was offered that a committee of three be appointed, to wait upon Congress, and request them to regulate the quarantine laws. Adopted.

The report from the delegate to the Canadian Medical Association was received, and referred to the Committee on Publication.

The report of the Committee on Communications was adopted, and the committee continued.

Dr. Stewart, District of Columbia, offered a resolution that gentlemen not members of the association were not eligible to serve on its committees. Tabled.

A resolution was offered, regulating the duties of superintendents of hospitals. Adopted.

A resolution was offered and adopted in relation to certain so-called medical works that had been published which were injurious to the reputation of the profession, as follows:

"*Resolved*, That any person signing his name as author of such work shall be refused membership in this association."

Dr. Jones, of the District of Columbia, submitted a tabular statement relating to the medical institutions and colleges throughout the country, embracing much valuable and interesting information, which, after being read, was referred for publication.

It was resolved that at the future meetings of the association a dinner should be given on the third day of the convention, at the expense of the members eating the dinner.

Dr. Mussey, of Ohio, offered the following:

"*Resolved*, That that clause in the by-laws which provides that every alternate meeting of the association be held at Washington be repealed, and that in the future the place of meeting should be determined at each session of the association."

The resolution was concurred in.

Dr. Kerwin, of Pennsylvania, then read a lengthy report on the treatment of the insane, which was received and referred to the Committee on Publication.

Dr. White, of Buffalo, offered a resolution that the different medical schools of the country establish chairs on mental disorders. Adopted.

The Committee on Prize Essays submitted a report, which was adopted.

A resolution was offered that a committee be appointed to report what, if any, legislative means could be taken to prevent the spread of epidemic diseases. Adopted.

Dr. C. C. Cox inquired if the Committee on Ethics would make any further report on the weighty matters before them.

Dr. Antisell called attention to a paragraph from the *Chronicle* of yesterday morning, charging the Committee of Arrangements with certain actions that should be denounced by the association. He denied the charges, and asked the association to sustain the committee in its action.

On motion, it was decided to postpone the further consideration of the subject until after the report of the Committee on Ethics had been received.

Dr. N. S. Davis, of Illinois, then submitted, on behalf of the majority of the Committee on Ethics, the following

REPORT.

It appears that the matters reported to your Committee of Registration, and so much of the action of the majority of same committee as relates to the same subjects, embraces the three following subjects:

First. A charge that the majority of the Registration Committee had refused to register the delegates presenting credentials from several societies, colleges and hospitals in the District of Columbia, which claimed the right to representation.

Second. Direct charges against the Washington Society and the Medical Association of the District of Columbia, accompanied by a protest against the admission of delegates for those bodies.

Third. Direct charges, which had been lodged with the Committee of Registration, against the National Medical Association of the District of Columbia, accompanied by a protest against the registration of delegates from that society, and from such other institutions as were supplied with medical officers who were members of that society.

In regard to the first charge, your committee find on investigation that the Registration Committee have duly registered all the delegates from all the medical institutions claiming representation in the District of Columbia, in accordance with the usages and by-laws of the association, except the Medical Society of the Alumni of Georgetown College, the National

Medical Society, the Howard Medical College, the Freedman's Hospital, and the Small Pox Hospital, these being the institutions included in the charges already mentioned in the third specification.

It remains, therefore, only to consider the second and third specifications, and your committee ask leave to report on these separately. In relation to the second we unanimously recommend the following resolutions:

"*Resolved*, That the charges offered by Dr. Reyburn, as a minority of the Committee on Registration, against the Medical Society and the Medical Association of the District of Columbia, are not of a nature to require the action of the American Medical Association, the first charge referring to a duty imposed on the society by an Act of Congress, and the second referring to a matter which does not come in conflict with any part of the code of ethics.

"*Resolved*, That so far as relates to the Medical Society of the Alumni of Georgetown College, it has been shown to us that the society has sixty resident members, and is therefore entitled to six delegates instead of as requested by the committee."

In regard to the third proposition relating to the National Medical Society, Howard University Medical College, the Freedman's Hospital, and the Small Pox Hospital, we recommend the following:

"*Resolved*, That the duties of the Committee of Arrangements, so far as relates to the registration of members, is purely clerical, consisting in the verification of the certificates of delegates and a report on the same. If credentials in proper form are presented from any society or institution professing such few as would place it *prima facie* in the list of institutions enumerated in the constitution of the association as entitled to representation, but against which charges have been made or protests presented, the names of the delegates presenting such credentials, together with the charges or protests in the possession of the committee, should be represented to the association for its action.

"*Resolved*, That the charges lodged with the Committee of Arrangements against the eligibility of the National Medical Society of the District of Columbia have been so far sustained that we recommend that no member of the society should be received as delegates at the present meeting of this association."

N. S. Davis.
H. F. Askew.
J. M. Keller.

Dr. Alfred Stille, of Pennsylvania, then submitted the following as a

MINORITY RERORT.

The undersigned, members of the Committee on Ethics, while subscribing to the greater portion of the report of the majority, feel it their duty, nevertheless, to dissent from the final resolution recommending the exclusion of the members of the National Medical Society of the District of Columbia from the present meeting of this association; they offer, therefore, in lieu of that resolution, the following:

"Whereas the institutions excluded from representation by the action of the Committee on Credentials, viz.: The National Medical Society, the Howard Medical College, the Freedmen's Hospital, and the Small-pox Hospital, are regularly organized as the constitution of the association requires; and whereas the physicians so excluded are qualified practitioners of medicine who have complied with all the conditions of membership imposed by the association; and whereas, in the judgment of the undersigned, no sufficient ground exists for the exclusion of such institutions and physicians from this association: therefore,

"*Resolved*, That the institutions above named are entitled to representation, and that the physicians claiming to represent them are entitled to seats in the American Medical Association"

ALFRED STILLE.
J. J. WOODWARD.

Motions were made to accept and reject the different reports, when, amid the greatest excitement, the yeas and nays were called for.

Dr. Howard, of the District of Columbia, asked who of the District were entitled to vote.

The chair then decided that those gentlemen were entitled to vote who had been unanimously admitted by the Committee on Ethics.

Dr Cox endeavored to speak, but, amid cries of "Sit down," was forced to desist

An appeal was taken from the decision of the chair, which was not sustained, the vote being 115 for and 90 against.

The secretary began to call the roll upon the question of laying the minority report upon the table about 1.30, and continued until 2 o'clock, when the secretary announced the vote—yeas 107, nays 85. The minority report was accordingly tabled.

The greatest excitement prevailed throughout the calling of the names

A motion was made to adopt the majority report.

Dr. C C. Cox, of Maryland, then addressed the association, protesting against its action in rejecting the minority report, and gave a brief history of the origin of the differences of opinion now existing among the several societies of the city. Dr. Cox, during his address, was frequently called to order.

The question on the adoption of the majority report was then called, but it was thought to be unnecessary, as the rejection of the minority report adopted it.

RECEPTION AT MAYOR BOWEN'S.

Last evening the Medical Association visited the Capitol, for the purpose of seeing the dome lighted, with which operation they all expressed themselves much gratified. The association, *en masse*, then called upon Mayor Bowen, filling the entire house to such an extent that anything more than a formal reception was impossible. The evening, however, passed off very pleasantly.

FOURTH DAY.

The association assembled at Lincoln Hall, Professor George Mendenhall in the chair, and Professor W. B. Atkinson, Secretary.

A resolution was offered by Dr. J. J. Woodward, United States Army, that the Surgeon General be requested to authorize Dr. Woodward to make copies of his photo-microscopic slides, to be distributed at a fair

price to such medical colleges and institutions as may desire their use. Adopted.

A debate then occurred on the duties of the Committee on Ethics in the matter of passing on the credentials of delegates representing institutions which admit women to the practice of medicine.

Professors Hartshorn, Bell, Davis, Maddux, and Cohen, participated in the debate, after which the matter was indefinitely postponed.

Dr. Palmer, of Maine, offered a resolution of inquiry as to why the Howard Medical College had been excluded from admission into this association, stating that the institution had been chartered by special act of Congress, and was recognized all over the country as a first-class college.

A discussion took place on the adoption of the resolution.

Dr. N S. Davis, of Illinois, said if the resolution was withdrawn, he, as chairman of the Committee on Ethics, would give his reasons in writing why the institution was excluded.

The resolution was withdrawn.

Dr. R. J. O'Sullivan, of New York, then offered the following:

"Whereas apothecaries are accustomed to renew medicines prescribed by physicians without due authority from the physicians, thereby doing much injury to patients, and by which many lives have been destroyed; and as apothecaries are unwilling to discontinue the practice except by a general action: therefore

"*Resolved*, That this association take such action as will bring about the discontinuance of the practice."

Referred to a special committee.

A protest against the adoption of Dr. Pinkney's report of the medical corps of the navy was submitted, and, after some debate, was laid on the table, and the whole subject referred to a committee of three, to report at the next meeting of the association.

The Committee on Ethics made reports on several cases relating to charges against individuals and colleges in the different States, and they were referred to appropriate committees.

A paper was read on the treatment of the insane; which was referred to the Committee on Publication.

Dr. Hartshorn, of Philadelphia, offered a resolution that the constitution be so amended as not to exclude women from membership of this association. Laid on the table.

Dr. Powell, of Atlanta, Ga., offered a resolution that the association do not recognize any college or institution against which charges are pending.

It was opposed by Dr. Reyburn, of the District of Columbia, and advocated by Dr. Powell, after which it was laid over, under the rules.

Dr. Lee offered a paper on insane institutions; which was referred to the Committee on Publication.

A paper on epidemic diseases was read and referred.

A vote of thanks was tendered to Mayor Bowen for entertaining the association at his residence on Wednesday night.

A motion was made that the next meeting of the association be held in San Francisco, California, in June next.

A resolution declaring Dr. Horace Wells, of Boston, to be the discoverer of anæsthesia, was adopted.

A resolution of thanks was tendered to Dr. Mendenhall for the able manner in which he has presided over the deliberations of the association.

Dr. John Sullivan, of Massachusetts, offered the following:

"*Resolved*, That no distinction of race or color shall exclude persons claiming admission to this association who are duly accredited thereto."

During its reading the speaker was met with a storm of hisses, which compelled him to stop. Cries of "Go on," "Go on," were heard, and he said he would do so when the serpents became quiet. He then finished its reading, and was allowed to speak seven minutes.

[Although Dr. Sullivan's remarks are reported in full in the Washington papers, as we do not find in them anything more than an ordinary stump speech, we do not reproduce them.]

During the delivery of the speech, great confusion reigned, and had it not been for the persistent efforts of Dr Yandell, of Louisville, Ky., at one time surgeon-in-chief of Kirby Smith's army, Dr. S. would not have been able to have concluded his remarks. During their delivery, Dr. Yandell appealed to the sense of the convention to allow him to proceed, stating that he was a Southern representative, but that he desired fair play, and trusted that Dr. Sullivan would be heard.

Upon the conclusion of Dr. Sullivan's remarks, Dr. N. S. Davis, of Chicago, read the following

REPORT OF THE COMMITTEE ON ETHICS.

In reply to the resolution of the association calling upon the majority of the Committee on Ethics for the reason why they, in their report, exclude the delegates from the Medical Department of Howard University, they respectfully state that there is nothing in the report which directly excludes delegates from the said University or any other medical institution in the District of Columbia, except the National Medical Society.

The resolution on this subject, reported by the committee, is in these words:

"*Resolved*, That the charges lodged with the Committee of Arrangements against the eligibility of the National Medical Society of the District of Columbia have been so far sustained, that we recommend that no members of that society should be received as delegates at the present meeting of the association."

It will be seen that the only parties excluded from admission as delegates at the present meeting are the members of the National Medical Society. If the Medical Department of Howard University had chosen to send any delegates who are not members of that society, there is nothing whatever in the report to prevent them from being received

In the papers referred to your Committee on Ethics were a list of charges with specifications in the usual form against the registration of the National Medical Society. These charges may be clearly stated as follows:

1. That said National Medical Society recognizes and receives as members medical men who are not licentiates, and who are acting in open violation of sections 3, 4 and 5 of the law of Congress constituting the charter of the Medical Society of the District of Columbia

2. That a large part of the mnmbers of the National Medical Society are also members of the National Medical Association of the District of Columbia, and are openly and freely violating the rules and ethics of the association to which they have subscribed.

3. That they have, both in its capacity as a society and by its individual members, misrepresented the action of the Medical Society and the Medical

Association of the District of Columbia, and used unfair and dishonorable means to procure the destruction of the same, by inducing Congress to abrogate their charter.

Each and all of these charges were, in the opinion of the majority of your committee, fully proved by the members of the National Medical Society themselves, who appeared voluntarily before your committee as witnesses. Therefore, if we have any regard to the maintenance of the laws of the land or the ethics of our medical organization, the undersigned could not come to any other conclusion than was expressed in the last resolution recommended by the majority of the Committee on Ethics.

Dr. Robert Reyburn rose to reply to the report, but was called to order, as not being a member. Finally the convention allowed him five minutes to speak.

Dr. Reyburn said that he had never violated the code of ethics, and had favored the admission of colored men to the college to which he belonged. No man should be excluded on account of color. His resolution had not been received by the old society, and he was now a member of the National Medical Society. If that constituted a violation of the code of ethics he plead guilty. Last year he had been chairman of the Committee on Credentials at New Orleans, and when about to make his report he was shamefully treated by the Committee of Arrangements.

Dr. Antisell denied the assertion.

Dr. Loomis, of the District of Columbia, stated that he was a member of the Faculty of Medicine of Howard University, and he could see no reason why he was excluded. He then offered a resolution to the effect that the members of the Committee on Ethics who signed the majority report be censured for so doing.

His resolution was laid on the table.

Dr. Johnson, of the District of Columbia, President of the Medical Society of the District of Columbia, then proceeded to give a detailed history of the difficulties existing in our local societies. He also stated that Dr. D. W. Bliss had violated the rules of ethics by having his name printed on a bill of fare at Willard's hotel.

Dr. Bliss denied its having been placed there with his knowledge.

Drs. Johnson, Busey, and Marbury sustained the charge by statements.

After which Dr. Busey replied to certain statements of Dr. Johnson, and read the sixteenth rule of the code of ethics, showing that the code had been violated in the attempt to force the colored man upon the society. This was what had caused all the trouble. Dr. Borrows had been instrumental in bringing about the color difficulty. He denied that politics was the cause of the difficulty, as had been stated by Dr. Cox.

The vote was then taken on Dr. Sullivan's resolution, and it was tabled by a vote of 106 yeas to 60 nays.

Dr. H. R. Storer, of Boston, offered the following:

"That, inasmuch as it has been distinctly stated and proved that the consideration of race and color has nothing whatever to do with the decision of the question of the reception of the Washington delegates, and inasmuch as charges have been made in open session to-day distinctly attaching the stigma of dishonor to parties implicated, which charges have not been even denied by them, though present; therefore,

"*Resolved*, That the report of the majority of the Committee of Ethics be declared as to all intents and purposes unanimously adopted by the association."

The resolution was adopted by a vote of 112 yeas to 37 nays.

The association then adjourned *sine die*.

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EDITED BY J. ADAMS ALLEN, M.D., LL.D.; AND WALTER HAY, M.D.

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Original Communications.

ARTICLE I. — *A Uterine Polypus of Eighteen Years Growth Successfully Removed.* By J. W. BROOKS, M.D., Chicago.

On March 28th. 1870, I was requested to visit and examine Mrs. ——, recently from St. P——, who gave me her history as follows: Age 52 years; married at 17 years; enjoyed uninterrupted good health from birth up to 1850, and prior to that time bore one child. now living. Early in 1850 she conceived again and without apparent cause miscarried, at the fourth month of gestation. Her general health continued good. but from this time the monthly molimen was markedly increased. In 1852 she again conceived, and miscarried at the fourth month.

From this period her health was impaired from repeated hæmorrhages, both at the month and during the interval. Four months from the last miscarriage a polypus, recently removed, came down during a hæmorrhage and presented at the vulva, occasionally interrupting the flow of urine. She was under the care of

various medical gentlemen, scarce two agreeing as to the nature of the malady. About 1856 she visited Chicago for medical advice.

One gentleman gave no opinion; another, under whose care she was placed, pronounced it "the worst case of prolapsus uteri he had ever seen." She returned to her home after four months of treatment. At this time she plead for the removal of "the thing," as she called it, but no one approved of an attempt, and for twelve more years she continued to suffer from prostrating hæmorrhages, often confined to her bed for weeks, in consequence thereof. In 1866 the catamenia ceased. In December, 1869, after a copious and protracted hæmorrhage, she came again to Chicago, to seek further professional aid, and was examined by several members of the medical profession, who gave divers opinions. One, that it was an ossified tumor; another, that it was a fibrous tumor, involving the uterus, and, perhaps, appendices, etc., etc. She had not been able to urinate or defecate for years, except as she pressed up the polypus, and for twenty years had not been free from pain through the hips and in the lower part of the back.

After this relation the writer proceeded to investigate. The vulva were separated by an apparent fibrous body. Following that body with the index finger, a constriction was found about four inches from the external point, and at this place the great diagnostic difficulty was encountered, for above this the whole vagina was roofed over with the adventitious growth. Seizing it by the constricted portion, and drawing it downwards and backwards, I was able to carry the index finger under the arch of the pubes, and upward, until a rounded edge of a cup-shaped cavity (resembling an inverted toadstool) was reached. Carrying the end of the finger over this edge and drawing it downward, not less than one and a half gills of muco-purulent matter was emptied out, and this enabled me, as I thought, to enter a uterine sound within the cavity of the uterus, an inch or more, and felt sure the growth was attached to the inner, posterior and middle part of that organ. Subsequent examinations confirmed me in the opinion, and my friend Dr. Skeer, who was present at the last examination, coincided with me. I now gave to the patient the opinion that it was a uterine polypus, and thought it could be removed without very great danger to life. She instantly asked when I would do

it, and the 14th of April was fixed for the operation. On the day named, assisted by Dr. Skeer, I protected a wire ecraseur with a gum catheter slipped over it, and carried the same, thus guarded, up to the constriction, on the posterior part of the polypus, and, by careful manipulation, was able to carry it over the flange and slip it into the cup, making careful and constant traction, and pressing with the finger, until it passed below the os uteri, around the pedicle in the bottom of the cup, then removing the catheter from the ecraseur, the ends of the wire were entered into the fenestra at the end of an ecraseur staff (a plate of which staff, with a spring chain, can be seen in the CHICAGO MEDICAL JOURNAL for June, 1867, and was first used in a case there narrated), the arch of the staff being carried under the pubes, upward and backward, until it reached the pedicle, when the wire was fastened to the slide, firmly, the loop of the ecraseur being nearly at a right angle with the staff. The polypus was soon removed, and with little pain attending the operation. The next difficulty was the removal of the polypus from the vagina, which required my full strength to bring the upper part through the vulva. The hæmorrhage for the moment was profuse, but a sponge saturated with a mixture of one part of Squibb's Perchlorid Ferri, and two parts of water, was placed directly over the bleeding vessels and soon checked it. A "T" bandage was snugly applied, and one-fourth of a grain of morphine was given with some brandy. She passed a comfortable night, and no unpleasant symptom followed. From the second day after the operation the vagina was washed out twice, daily, with a solution of Hyposulphite of Soda in Aqua Rosæ, for about two weeks.

The dimensions of this amorphous polypus, after the blood was removed, were as follows: Circumference, below the constriction, twelve inches; circumference at the constriction, nine inches; circumference above the constriction, eighteen inches; circumference, longitudinally, more than twenty inches. Weight, after the removal of the blood, one pound ten ounces. Estimated weight of blood removed, four ounces. The sinuses in the polypus were very large, and the structure was strictly fibrous. The shape was cylindroid from the lower part to and just above the constriction. From thence it was a reflex growth upwards and outwards in all directions, spreading like a flange over the crest of the pubes, linea ilio

pectinea and promontory of the sacrum, forming a cup-shaped cavity, in the bottom of which a short pedicle, one and one-fourth inches in diameter, was found. In the cavity depended the uterus, surrounded by the adventitious growth. The expanded os and cervix uteri were drawn into the bottom of the cup. Herein consisted the difficulty in forming a correct diagnosis, and led a professional gentlemen of high standing to regard it as a fibroid disease of the walls of the uterus. On the ninth day after the operation, an examination with a speculum showed the parts healthy, and the os uteri contracting.

The lady at this writing, May 30th, 1870, is in perfect health. The polypus is preserved, at my office, 55 South Clark street, and any one desiring, can see it.

ARTICLE II. — *Clinical Experiences in Private Practice; from a Physical Basis of Life.* By Z. C. McELROY, M.D., Zanesville, Ohio.

Albert Patterson, aged 12 years; comfortably housed, clothed and fed; goes to school during the day, and serves a carrier's route on a daily evening paper; returned from school, Wednesday afternoon, 30th March, 1870, and complained to his mother that his head ached, and that he felt tired. She noticed that his face was flushed, but attributed both to a cold. He, however, served his carrier's route that and each succeeding evening during the week. On Sabbath he was, if anything, worse, and seemed reluctant to go to sabbath school; but a few cheering words from his mother induced him to go. At sunday school he was very dizzy, and thought many times he would have to lie down, but managed to stay till school was dismissed. He reached home only with the greatest difficulty, was very dizzy, tired and weak, and went to bed immediately. His mother bathed his feet in hot mustard water, and as they were still cold, placed hot irons to them in bed. As he was no better on Monday, his mother packed him in a sheet, wet with warm water, during the forenoon, for the purpose, as she said, of breaking up his cold. He was in the wet sheet

about an hour and a half, and on taking him out, his mother made an attempt to wash him all over, with hot water, in which she had dissolved some washing soda, but he became very sick, had a sinking spell, and she thought he would have convulsions. She rubbed him with warm flannel, and hastily put him to bed. He now became delirious all the time, and his hands and feet could not be kept warm.

Such is the mother's statement of his condition previous to my first visit, 6½ o'clock, P. M., Monday, 4th April, 1870. Skin cold, purplish, and clammy; pulseless at both wrists; just below the axilla, on the inside of the arm, the pulse counted 180: pupils dilated; temperature 107; shallow, rapid, and sighing breathing. Could get no response to questions, either by myself or his mother. He was in fact, and to all intents and purposes, in articulo mortis. In my first, and necessarily hurried investigation of Albert's case, no effort was made to connect the phenomena with the name of any disease, nor were any questions asked of the parents, in regard to probable causes. Fully recognizing that there are but three possible processes in any living body, viz: increased motion in the interest of repair, or waste; decreased motion in the interest of repair, or waste; and changing forms; no difficulty was encountered in getting at what was actually taking place in little Albert's body, without coupling the pathological condition with any name for his condition, which was that motion in the interest of repair was wholly suspended, while motion in the interest of decay, or waste, was proceeding at a velocity only co-incident with changes in the molecular forms, or structure of his tissues, with retention of the results of tissue metamorphosis. The indications for remedial management were to retard motion, eliminate effete matter, and change the chemical nature of the virus, or poison, so-called, or rather the mode of force engaged in changing the molecular forms of the tissues.

Impressed by the imperfect circulation of his blood, that there was a large deficiency of water in his body, it was decided to flood it with water, the effect of which would be a probable return of the circulation to the extremities, possibly some of it would be returned by vomiting, but the greater part would find exit through the kidneys, carrying with it some of the results of tissue metamorphosis, and would certainly open the way for more efficient

elimination by all the avenues through which effete matter is passed from the body. In his unconscious condition this was no easy task, as all he would probably do would be to resist its introduction. A pitcher of warm water and tumbler were brought to me, and, aided by his mother and sister, and a resolute neighbor lady, some eight or ten tumblersfull were passed down his throat, and to the whole proceeding he made all the resistance in his power. To a looker-on the process of compelling the child to swallow that which, apparently, he did not want, would appear an unnecessary and cruel proceeding with a dying boy. But the stake was a large one—a life to be won or lost in a very few hours. At the conclusion, when he was laid down, the pulse had returned, as anticipated, in considerable volume, at his wrists. But his extremities were still cold, and requesting warm irons to be placed to his feet and legs, he was left for a couple of hours.

At 9½ P. M. found Albert very restless, pulse small and thready at wrists, and flitting at 180 per minute; he had not vomited any; his temperature was not ascertained. Half an ounce of Chlorate Potassa was dissolved in one pint of water, patient to have a wineglassfull every two hours till gone. Requesting his mother to have him placed on the vessel and asked to pass water, at least every two hours, and to keep warmth to his feet, he was left for the night. Before leaving the house the mother and family were informed of his desperate condition, and that though he would probably die during the night, it was my desire that she should resolutely compel him to swallow the Chlorate solution, and not to omit anything she was requested to do, for it was barely possible that his youth and the treatment might carry him through the crisis.

On my way home, my mind, of course, dwelt on his case. Here was a little boy at the very verge of death, due, in the technical language of the profession, most likely, to some poison or virus. Scarlet fever, so-called, had been lingeringly prevailing in our community, for the past year, and the phenomena presented by little Albert impressed me with the idea that he was being overwhelmed by the so-called scarlet fever poison. The temperature indicated a rapidity of molecular changes incompatible with the maintenance of the normal molecular forms of the tissues for many hours; and as he had only ordinary evacuations from either

bladder or bowels since the commencement of his illness. his body was loaded down with the results of tissue decay; and his immediate danger was, therefore, from so-called uraemic poisoning, which, in language which will give rise to correct mental impressions, is not simply urea, or urine retained in the blood, but the total results of tissue metamorphosis, less the gaseous products escaping at his lungs.

All organic poisons, so-called, produce their effects in living bodies by changing the molecular forms of the tissues; and any organic compound, solid, or fluid, or gaseous, which does not modify, or change tissue forms, is as innocent as milk, or water itself. And all organic poisons, so-called, but more properly form-changers, originate from the retrograde metamorphosis of animal tissues, or other complex organic compounds. Poison, organic poison, originates in decay, and is symbolical of decay. Living beings, more particularly those eating flesh, or concentrated food, have no greater enemies in nature than the results of the decay of their own tissues. The herbivora less so, but still more or less dangerous. The flesh-eating lower animals, for the most part, cover their excrement with earth.

But in reference to little Albert, with something over two quarts of water recently introduced into his body, with what he will get during the night, holding the Chlorate of Potassa in solution, elimination can hardly fail to be active during the latter part of the night, it seems to me he has had given to him the best chance for his life known to the practitioner's art.

5½ A. M. Patient much the same as at last visit last night; perhaps more restless, as he does not lie still five seconds at a time, the jactitation is extreme. Has consumed the whole pint of Chlorate Potassa solution, and his mother, fearing that he had lost some, had made another solution, one-half of which had been given. Had passed urine several times during the night, but has no pulse at the wrists; skin cold, clammy, and purplish; pupils widely dilated; temperature 106. Determined, if possible, to retard the velocity of tissue waste, and to bring on a critical elimination, gave ten drops Fluid Extract Veratrum Viride, to be repeated every hour till my return. Determined, also, to give him every possible chance for his life, the injection of liquor ammonia into one of his veins, was the next step resolved on. A neighboring physician was

called on to assist, but not finding him at home, the matter was unavoidably postponed till after breakfast.

8 o'clock, A. M., 5th April. Albert has had three doses Veratrum; the pulse had fallen to 84 per minute, and could now be felt at the wrists; temperature 103; very restless; bowels discharging involuntarily in bed. In consultation, the case was considered hopeless, and as the pulse had fallen, the injection of liquor ammonia was deferred, for the reasons that to get at a vein, a wound must be made, and as the proceeding was unusual, in case of his death, there might be censure. The consulting physician stumbled me no little by stating that he thought his lungs were so much congested as not to permit the air to enter. Hastily returning to the patient, they were examined, but found entirely free, and the air entering all parts of them. The consulting physician also objected to Veratrum, on account, as he said, of its depressing effects. I suggested Chloral Hydrat, to which assent was given, and a two ounce solution, with drachm of Chloral, prescribed, and sent for; and a tablespoonfull to be given every hour till restlessness was controlled. A flax-seed cataplasm, with one-eighth ground mustard, was prescribed, to cover his chest, and a mustard poultice, alone, to nape of neck. He is also to have brandy and milk forced down his throat. A previous engagement for this day would prevent my seeing Albert again till evening, the consulting physician was to call at noon. He found he had vomited very freely, and had passed a good deal of urine and feces in bed, and was much more calm. The Veratrum was resumed in small doses every hour.

5 o'clock, P. M. Temperature 103½; pulse 120; much better. He sleeps some now, and begins to demand fluids. He is to have solution Chlorate Potassa during the night, and bread and milk, if he will take it.

6th April, 8 o'clock, A. M. Has slept some; is quite rational; passes urine freely: temperature 102½; pulse 120. Is considered convalescent: to have food, and, in the afternoon, Rochelle Salts, to move his bowels.

A report reaches the family that one of the little carrier boys, while waiting for their papers, Saturday afternoon, at the printing office, had some wintergreen leaves, or, as he called it, mountain tea, which he gave to the other boys; that Albert had taken some, and on tasting them said they were very bitter, and it

was soon ascertained that they were Laurel leaves. (Kalmia Latifolia). But Albert, who is now entirely rational, says he did not taste any, nor had he any at any time in his possession. He remembers that there was a boy who had some mountain tea, but he did not give him any; and persists in saying so to the present time. The symptoms of Laurel poisoning would hardly be delayed so long, and besides, they indicate that Laurel only retards motion, but does not change forms, so that his statement that he did not eat any is probably correct. He does not now remember anything after returning from sunday school.

7th April, 9 o'clock, A. M. Has slept a good deal, and is still improving. Says he feels weak, but has no pain, and takes considerable food. Pulse 120; temperature 102½. Bowels not having moved, he is to have solution of Epsom Salts, this forenoon, and all the food he will take.

5 P. M. Bowels have moved freely; temperature 103½; pulse 120. To have Chlorate Potassa solution during the night.

8th April, 9 A. M. Very much better again this morning; enjoys his food; passes water freely, but has a temperature of 102½, with pulse 116. As motion in the interest of repair is fully active, nothing to be done to retard the rate of waste in progress, as shown by the thermometer.

9th, A. M. Still improving, eats well, sleeps well; wants to be dressed and set up to-day, and is permitted to do so. Temperature 102; pulse 116.

The further progress of the case presented only this special feature, that for ten or twelve days next succeeding, his temperature and pulse, whenever ascertained, and that was only once a day, or on alternate days, was never below 102, and 114. Had the process of repair been less active, this would have occasioned some anxiety; but as motion was equally active in the interests of both repair and waste, no interference was made by remedial agents. In ten or twelve days he resumed his duties on the carrier's route, and calling at my office occasionally, his temperature and pulse were never found below 102 and 110.

It still seems to me, Albert was poisoned, in professional technology; that the greater part of his body had undergone such changes of molecular forms, by some mode of force, probably that of so-called scarlet fever, as to render it unfit for the evolution of

the normal phenomena of life. But it matters very little in the professional management of his case, what particular mode of force it was; as the result and management would have been the same. The pathological fact was, that when first seen, motion in the interest of repair was wholly suspended; and the rate of waste was rapidly hastening him down to death. In looking backwards at the case, it would appear as probable that flooding his system with warm water, the Chlorate Potassa, and Veratrum Viride, were the agents which turned the tide of his life. The Chloral Hydrat was certainly inert, and he owes his life to the thorough elimination, mainly brought about by the water and Chlorate Potassa, and the sudden check of motion in the interest of waste, by the Veratrum. The five or six drachms of Chlorate of Potassa given the first night may seem large, and it was large, but none too large, for it seems to me the results justify the means to the end attained. Each of these agents was employed with definite conceptions of the processes and ends to be accomplished; and from beginning to end, there was no doubt or hesitation, save the little jolt due to the consultation.

The management of this case may be taken as an example of therapeutics from a physical basis of life, and can hardly fail to commend itself to practitioners most indifferent to "new theories," as they term them, in reference to pathology and therapeutics as well as physiology.*

ARTICLE III.—*Treatment of Conjunctivitis Neonatorum.* By E. L. HOLMES, M. D., Professor of Ophthalmology and Otology, in Rush Medical College, and Surgeon to the Chicago Charitable Eye and Ear Infirmary.

(Read before the Illinois State Medical Society.)

There are two methods of treating conjunctivitis of new-born infants, each recommended more or less urgently by different authorities.

By one plan, very weak solutions of the ordinary astringents are injected or instilled under the lids at short intervals.

* See Chicago Medical Journal, January, 1870.

By the second plan, a much stronger caustic astringent is applied to the palpebral conjunctiva—the portion especially affected—once, or, in unusually severe cases, twice daily.

Not wishing to dwell upon the nature and causes of the disease, I will simply state that it is, without doubt, in by far the larger portion of cases, simply a catarrhal conjunctivitis.

Infection, either from leucorrhœal or, especially, gonorrhœal discharge in the vagina of the mother, must be regarded as a less frequent cause than many have supposed.

A certain diagnosis in reference to the cause of the disease, is almost absolutely impossible, in consequence of the very great tendency of simple catarrhal conjunctivitis in infants to assume strictly a purulent form.

The treatment, therefore, must be based upon the character and amount of the discharge from the eyes, rather than upon the cause of the inflammation.

This inflammation, if not early arrested, is exceedingly liable to become in the highest degree purulent. This marked tendency to purulent discharge, seems to depend upon some condition of the conjunctiva peculiar to infancy; perhaps no more readily explained than the fact that the iris in infancy is less susceptible than that of adults.

The point, to which I ask especial attention at this time, is in reference to the difficulty of ensuring a suitable application of mild remedies in violent forms of inflammation.

It is undoubtedly true that so long as there is a little swelling, and the discharge contains scarcely any muco-purulent matter, the frequent application of weak solutions may be entrusted to the nurse.

However competent this method may be even in severe cases, it must be remembered that frequency and thoroughness of the applications are the conditions on which success depends.

The fear, on the part of mothers and nurses, of causing pain and crying, in very many, if not in almost all, instances, prevents the thorough application of these remedies. It is well known that the simple act of holding the head and opening the eyes causes an infant to cry violently.

Physicians in the country and usually those in the city are unable to visit an infant more than once or twice daily. In addition

to the inefficient manner in which the remedies are too often employed, there is danger of injury to the eye in introducing the point of the syringe. Moreover, there is danger not altogether small that the stream from the syringe may accidentally carry purulent matter from the patient to the eye of the attendant.

For the past eight or ten years I have invariably employed in severe cases the second plan I mentioned, which consists in making an application, once or at most twice daily, of a strong caustic astringent.

In nearly all the cases which I am called to treat, either in my own practice or in consultation, the disease has continued a week or more with great swelling and discharge.

The application is made in the following manner: after the palpebral conjunctiva has been as extensively exposed as possible, and thoroughly cleansed from moisture by gently pressing upon the inflamed surface a soft piece of linen, quite a large camel's hair brush, merely moistened with a solution of argent. nit., gr. x.–xx. to the ounce, is lightly passed over the conjunctiva.

Great precaution should be taken that the solution is applied to as much of the conjunctiva as possible, and in such a manner that it shall not flow over the cornea. The eyes should be gently cleansed almost every hour with tepid water.

Ulceration or even sloughing of the cornea do not contraindicate the use of the applications above described.

It should be remembered, however, that the indiscriminate use of strong caustics instilled between the lids, cannot be too earnestly deprecated.

The obstetrician, undoubtedly, meets with more of these cases in the early stages than the oculist, and relieves many patients by the very mildest means, when they are thoroughly applied by experienced nurses. The number of such cases, however, which are finally referred to the oculist, must be an evidence that such treatment is very often either in itself inefficient, or almost of necessity improperly applied.

It is not the object of this paper to discuss the treatment necessary in serious complications, but simply to remove from the mind of the general practitioner all fear regarding the use of strong caustic solutions (argent. nit.) in infantile conjunctivitis, provided they are applied in minute quantities equally distributed over the whole surface.

ARTICLE IV.—*Miscellaneous Practice.* By F. B. NORCOM, A.M., M. D.

(Reported by CHARLES CALDWELL, M. D.)

TRAUMATIC PERITONITIS.

CASE 1st. John R., æt. 17, sanguine temperament, and very healthy always, was wounded, May 26th, 1868, by the accidental discharge of a pistol, the ball entering the abdomen three inches to the right of the median line, and two below the plane of the umbilicus. Passing directly backwards it lodged beneath the integument, just three inches to right of spinal column. The accident happening near the Cook County Hospital, Dr. Root was summoned, who took the young man home, and attended him,—dressing the wound, giving full dose morphine, and doing all in his power to relieve his painful condition.

Dr. Norcom, the family physician, arrived at 3 o'clock P. M. and took charge of the case. The shock following the injury was almost a collapse. There was a discharge from the wound of blood and some dark looking fluid, which both Drs. Root and Norcom thought came from the ascending colon; and as he had considerable vomiting, the proof became more positive that the bowel had been injured. Dr. N., after a careful analysis of the case, concluded that his best chance for recovery lay in the full exhibition of opium, carried if necessary to narcotism; and under his directions ½ gr. morphine was given, the pulse being 120, respiration 40, with acute pain in bowels, and ¼ gr. every hour until its influence could be seen, which about 10 P. M. became apparent, as both pulse and respiration began to fall gradually.

Throughout the night he rested tranquilly, his urine being drawn off 10 P. M. and 8 A. M., 27th, when the respiration had fallen to 17 and pulse 110, and throughout the day the opiate was given every three hours, holding the respiration between 16 and 20, the pulse keeping an average of 110.

About 10 P. M., being somewhat nauseated, he vomited, or rather regurgitated four or five ounces of a dark green bilious looking fluid, for which small pieces of ice were given, and as about this time symptoms of exhaustion were being rapidly developed, brandy was ordered every three hours throughout the

night, and the hot fomentations of hops assiduously applied, to relieve tenderness and tympanitic distention.

The decubitus was on right side, with abdomen partially resting on the bed, in such a position as to approximate the wounds of abdominal wall and injured bowel, to prevent the escape of fluids in the cavity, and to facilitate soon as possible adhesion, and this position was maintained until inflammation had in a measure subsided. The first 24 hours the abdominal muscles were very rigid, but as distention increased they became more relaxed. On 27th and 28th the abdomen was very much distended, and tender all over from pressure; on the 29th, however, it began to diminish, when the existence of effusion became manifest; and on the morning of the 30th the pain was limited to a space of 3 or 4 inches diameter surrounding entrance of ball, where by this time adhesions were rapidly forming. Early on 31st had very acute pain in track of colon, due probably to distention from flatus, or the passage of hard fæcal matter, which was speedily allayed by warm opiate and aconite fomentations, though during the following night the tympanitis was greater than ever before.

To this date the urine had to be drawn every 12 hours, when he began to regain power, and passed it himself. The opiate treatment had been steadily pursued, with beef-tea and such quantities of brandy as the necessities of the case demanded; but, at end of this day—31st—a sudden change took place, the pulse running up to 140, very feeble and thready, while the respiration fell to 11 per minute and very irregular,—breathing three times in six seconds, with intermission of nine, and as he appeared to be sinking rapidly, brandy was given *ad libitum*, for his extremities were cold and shriveled, and his face bloodless and pinched.

The relatives and friends, supposing him dying, came to utter their farewells, though he lay quiet and lethargic, nor could hardly be aroused by questions put to him; but the stimulant treatment was pushed, and after a few hours the color began to return to his face, the extremities to grow warm, and his rallying became as sudden as his sinking had been.

Having gone to dinner, being absent about one hour and a half, was surprised upon my return to see the sudden change for the better, the pulse falling rapidly to 126, and respiration rising to 16. The mother, during my absence, being very anxious, was

imprudent enough to tell him he could never recover, but his courage and hope were proof against such predictions, and he expressed a determination to live through this ordeal, and he did so.

The disease had now reached its acme in the morning, when he came so near slipping through our fingers, and we had now nothing to fear, unless a relapse from imprudence, or the supervention of some such unhappy accident as diarrhœa, vomiting, hiccough, etc., etc. Treatment now gr.$\frac{1}{6}$ morphine every three hours; chicken broth or beef tea; corn starch; milk, etc. Pulse fell quite fast, being, 10 P. M., 106, respiration 18, regular, and sleep unbroken and refreshing during the night. At 7 A. M. pulse 100, respiration 18, and says he feels so well. Saw him again at noon, and was doing finely, but was called in haste at 4 P. M. to find him in great pain, with pulse 100, and respiration 28. This condition seemed to come from an effort on his part to arise from the bed and pass water, during the temporary absence of his mother, and he now feels as if there was to be a change. Lies on his back, with knees drawn up; severe pain in track of colon, and is restless and uneasy. Gave gr.$\frac{1}{4}$ morphine, and at 5.30 P. M. pulse 100, respiration 22; at 6.30 repeated the dose, and at 8 P. M. was asleep, pulse 96, respiration 20. About 11, vomited slightly, and about 12 o'clock, 1st June, pulse 96, respiration 20, perspiring freely, and his breathing slowly falling to 16 by 2.30 A. M., with some occasional vomiting, though accompanied by no pain. From this time he improved slowly, with little vomiting, while at 9 P. M. pulse stood 84, respiration 18, and he now passed for the first time a small purely fœcal stool.

A few weeks later, the ball was extracted by simple incision, and the patient is in the enjoyment of full health.

The record of this case has been little altered, except some slight pruning and condensation, for which I know my friend, the Doctor, will pardon me. The patient undoubtedly owes his life to the skillful and judicious management of Dr. Caldwell; and I can say that, throughout the whole sickness, my own services as consulting physician were of little account, and that everything necessary to meet the emergencies was promptly furnished by this accomplished physician.

During the late war, very many gun-shot wounds of the abdo-

men were presented for treatment, many including wounds of the large and small intestines; and though, of course, the mortality was great, yet a number of lives were saved—where indeed the chances seemed desperate—by the free use of opium, sustaining with liquid nourishment, and the judicious exhibition of alcoholic liquors. In the same way, penetrating wounds of the chest, especially when the lungs were involved, and attended by severe hæmorrhage, were treated by opium, or its alkaloid, and with beneficial results. For those two large classes of inflammatory affections—serous membranes, and mucous and cutaneous surfaces, the latter two of an erysipelatous character — there exists no remedy that for one moment can compare with it; and in that peculiar condition of the muco-serous lining of the smaller bronchial tubes and air vesicles—bronchitis—known as occurring in such blood diseases as erysipelas, rheumatism, gout, etc., it becomes *par excellence* our sheet anchor; especially, too, if combined with quinine, colchicum, and the ordinary auxiliaries of a sustaining treatment. Witness those attacks of iritis occurring in the later stages of continued fevers, and see how rapidly the effused lymph will disappear under the tonic influence of quinine and small doses of opium, when mercury would be useless to save sight, even if it did not destroy the patient. Again, in those pericardial and endocardial complications following acute rheumatism, especially in younger life, and generally showing themselves the first week —not so very frequent, I grant—observe how certainly they will be controlled by large doses of opium and quinine (*vide* Todd) assisted of course by repeated counter-irritation, and a nourishing dietary. And again, when gout may attack the stomach, giving rise to such acute distress from gaseous accumulation; or the heart, with its frightful intermissions; and ever producing dangerous meningeal irritation, can any drug be found like opium to meet the expectations of the practitioner?

You will not think, Mr. Editor, that there is too much enthusiasm displayed in thus speaking on some of our favorite themes; remember, I do not ride hobbies, as I consider such an infatuation fair evidence of a badly balanced mind; but I am a firm believer that, if this "God-given" drug were taken from us, more than half of our usefulness to the human race would be lost. Our most potent remedies are found in such drugs as act directly on

the nervous system,—such as opium, quinine, aconite, digitalis, *et hoc omne genus*,—and hence it is undoubted that our best advances must be in the direction of neuro-pathology. We know that the vaso-motor system of nerves controls the supply of blood,* and thus directly affects nutrition; and hence in all inflammatory diseases, where there is dilatation of the blood vessels, whether considered as the primary stage, or simply as a necessary accompaniment to increased cell growth (Virchow,) we necessarily resort to those remedies which, acting upon the sympathetic system, create contraction of those vessels, (Wilkes). Now the remedies above mentioned act in this manner, and few physicians there are who have not observed the remarkable effects of quinine (not antiperiodic) in certain stages of fever; of the action of that blessed anti-inflammatory drug, opium, in the acute diseases of the chest and abdomen; of the manner in which aconite and digitalis control the circulation, thus cutting short in a few hours many diseases, which, if allowed to go on uncontrolled, would, from their severity, cause long periods of confinement, if they did not eventually destroy life.

ALPHOS CIRCINATUS. (Syn: *Psoriasis Vulgaris.*)

CASE 2nd. Mr. H——; æt. 30 years; sanguine temperament, with strongly marked strumous tendencies; unmarried; and lawyer by profession. Habits always regular, never addicted to use of liquor or tobacco. Has been visited by no diseases, not even those incidental to childhood, until the occurrence of his present ailment, which first showed itself in his seventh year. It began to appear at this age just above the ankles, on the fibular surface of both lower extremities in the fall of 1847, and disappeared the following spring and summer, when the functions of the skin became more active.

From that date to June 24th, 1868, when he applied to me, the eruption had been gradually spreading, creeping slowly upwards, involving the abdomen and trunk, the upper extremities, and lastly scalp and face. Up to 1859, it had generally left him through the warm months, the disappearance, however, being each succeeding year less marked, but from this date it took firm hold, and exhibited itself persistently, despite every method of treatment

pursued. He states that he was prescribed for by many physicians, sometimes with alleviation, but at others the eruption would return with extreme aggravation.

His digestive system, soon after the first appearance, began to show some derangement, the food seemed to oppress him, giving not only uneasiness, but at times intense pain, paroxysmal and so acute as to double him up like attacks of colic, and then his nutrition became impaired, he began to lose flesh, and his mind so perturbed, that, like most dyspeptics, he grew into absolute hypochondriasis.

His antecedent history is the same as in most of such cases, beginning by a few tubercles capped by the ordinary scale; clusters beginning to develop, fusing into circular masses, then these aggregating into irregular patches upon a slightly elevated dull red base, well marked about the knees and elbows, and attended by the usual itching and desquamation. When he visited me for advice, June 24th, 1868, he was pretty well flecked *à capitê ad calcem*, the eruption perfectly characteristic of the guttated variety on the limbs and body, but so aggregated in patches about the joints of elbow and knee, as to have lost its definite circular outline in a great measure, though not exactly diffuse, with raised borders and depressed centers, and well covered with those imbricated scales of morbid epithelium. The scalp was suffering, the hair being filled with the cast off dèbris, and the forehead and cheeks variegated with many small circular and oval spots of the pityriasic variety. The pruritus was not intense, nor was there at this period any aggravation from such intercurrent visitors as erythema or eczema. Though his general health appeared fair, yet his face and condition indicated nutritive and nervous debility; tongue furred, his digestion pointed to defective gastric secretion; bowels somewhat costive; appetite capricious; and the concomitant mental disturbance sufficient to make him unhappy; to retire him, on account of his facial disfigurement, from society; and, not being in love with Chicago associations, to make him hate his species; and not to be wondered at in any man, no matter how healthy, who is engaged in business in this God-forsaken place.

Recognizing the case in all its bearings, I began treatment by regulating his bowels; assisting the digestion by my favorite combination of Gentian, Nux Vomica, Bismuth, and a small amount of

Morphia; and at meals the arsenio-ferruginous mixture of Wilson. His hair was cut close, the shampoo bath several times a week, with Juniper tar soap: the scalp well rubbed with a white precipitate ointment diluted with glycerine, as also those portions of the eruption where dryness formed a prominent feature, and his dietary limited to nutritious and easily digested substances. Under this judicious treatment, *me judice*, he began to improve slowly but surely, the eruption to clear up from center to periphery of each mass; the morbid epithelial secretion to cease; the pruritus to become less; the digestion to strengthen, with increasing desire for food; and his mental distress so much relieved, that he blessed the day he had applied to me, and I think he was right. About the following January, having passed through a cold snap, and having failed to pursue the treatment as rigorously as advised,—though at this time his skin was well cleaned, as also his face, except some few melasmic stains,—he again fell back, and the disease began to gain ground, and his digestion to again sympathize. Knowing that one's system may become habituated to a certain course of remedies, and that their therapeutical action may become more or less inert, I changed to the acid solution of arsenic (*de Valangin*), reinstated the baths, and ordered a very generous dietary. These measures were faithfully adhered to until the next Autumn, with almost complete disappearance of the affection; a thorough restitution of his gastric functions, and his skin became as pure and healthy as a new born baby's,—barring a few small patches about the joints. And yet, with all this improvement, secured by such protracted treatment, we can hardly hope for a permanent cure, inasmuch as his hereditary proclivities are too direct, and are constantly being lighted up and perpetuated by a too well marked strumous diathesis.

It is an accepted fact, and established by clinical observation, that arsenic is the remedy—almost a specific—in the treatment of the Squamæ. It is a neuro-tonic acting upon the peripheral plexus of nerves, a suspender of waste, and a vital assistant to blood-making. As alphous affections arise from a diathesis, it is to be inferred that, in its administration we desire an alterative effect, and hence give small doses for a long period; at the same time knowing that they are accompanied—even though the patient may be apparently healthy—by great defects of nutrition and

sanguification, we combine iron and such nervines as may enhance its own inherent virtues.

The case we have presented exhibits several points of interest; the first, the occurrence of the disease at the early age of seven years, when, as a rule, it is most apt to attack after puberty, or even in middle life, when growth has ceased, and waste often runs ahead of repair; again, its transmission from the paternal grand-father, neither his father, nor any of his brothers or sisters showing the least symptom; and lastly, after existing twenty-one years, how rapidly it improved, and was held in check by treatment. The differential diagnosis is not difficult, as only the tubercular syphiloderma can be mistaken for it. In the latter, the previous history will inform us of certain groups of specific symptoms; the eruption lacks symmetrical diffusion; it is not found around the articulations; and though its duration may be chronic, yet alphos exceeds all known cutaneous affections for chronicity. It is recommended by Wilson—one of the best authorities—to give arsenic in small doses to secure the alterative and tonic effect, but never to push the drug so as to produce constitutional irritation, and to keep up the remedy for months, or years should the necessities of the case demand. He rarely gives more than four or five minims of Fowler's Solution three times a day, or double that number of Valangin's Solution, and if he notices any symptoms of saturation,—or cumulative action (?)—he suspends at once. Arsenic has been tested by myself in a great number of such affections, but I must confess to having never obtained in cases of long standing any remarkable curative effects, until I had induced systemic saturation; the zonal congestive bands of conjunctivæ; perhaps muscular prostration, with nausea and colic; and in certain instances, sub-cutaneous effusion of lids, face, hands, etc. The remedy thus showing its irritative action, I merely lower the dose, say one-third, and soon as possible raise it again to as high a point as the system will bear, of course cautiously and gradually, watching my patient with closest observation. This is my own experience, with most of the arsenical preparations, and it can be safely said, that when the smaller doses—five to six minims—of the Liquor Potassæ Arsenitis produce no effect, given for weeks and months, that by increasing *one* minim every *two* or *three* days, until *ten* or *fifteen* are taken, a most decided improvement

will begin to appear; and in no instance have I witnessed any poisonous or deleterious action, nor been obliged to suspend—even though the dose had to be lowered—its administration.

ACUTE DYSENTERY.

Case 3rd. Mr. F——; æt. 34; married; nervo-bilious temperament; mason by occupation; and resident of Chicago seven years. Never suffered from any serious disease before. Habits are regular, and is very temperate, both as to the use of liquors or tobacco. Was taken ill Oct. 27th, 1869, and without assignable cause. Came home in the afternoon, feeling very chilly and weak; without appetite; some degree of feverishness; pains in the limbs, back, and abdomen; and throughout the night had several loose diarrhœal discharges. Next day, the 28th, being worse, the discharges becoming more frequent, accompanied by increased abdominal pain and tenderness, called in a physician. A purgative was immediately administered, to be followed by Dover's powder; with proper fomentations to belly; absolute rest in bed; demulcent drinks; and unirritating diet. Despite this judicious treatment, the discharges continued, streaked with blood, and now entirely of a mucous character; while a most distressing nausea and tenesmus came on; great disgust for anything by the mouth; increased tenderness of abdomen by palpation; marked prostration and despondency of mind; and a decided icterode shade of the surface.

On the 2nd Nov., having dismissed his attending physician—a very common occurrence among that class of Irish—he was persuaded by some friend to send for me, and I found him with a pulse 116, very weak and compressible; respiration 28; skin jaundiced and clammy—a condition so happily expressed by the French *poissonneuse;* tongue heavily coated with teeth indentations; abdominal tenderness and distension; much nausea; discharges frequent, scanty, with blood and pus; and decided muscular prostration. Recognizing that his former attendant had done all in his power to control these lesions, and that his treatment had been conducted properly and scientifically; I was obliged either to follow in his footsteps — *secundem artem*, — or to adopt a mode of management used in the extreme Southern States, where dysen-

tery, in the warm months, becomes so prevalent, and either as an endemic or epidemic disorder, at times fearfully fatal.

So, as a *dernier réssort*, he was ordered the infusion of the root of Ipecacuanha, as follows: 2 drachms of the root broken in small fragments, and infused in one pint boiling water, allowed to boil for a few moments, then cooled, and the supernatant fluid poured off. of which one-quarter (4 oz.) was given every fifteen minutes, until the whole was taken; at the same time warm fomentations to the abdomen continued, and absolute rest in the horizontal posture. Of course the most violent emesis ensued, continuing off and on for several hours, assisted by warm drinks and teas, and as soon as this had ceased, iced milk with lime-water was allowed, and at night a full dose of Battley's Sedative. He rested very fairly this night; only two slight discharges, and next morning his condition was improved, though there was still pain and tenderness, with a slight percentage of blood in the last stool, passed just before my morning visit. Upon the same pieces of the root twelve ounces of boiling water were poured, and, after cooling, one-fourth given as in the first instance, and though creating some little nausea and vomiting, it began acting—as it always does—on the bowels, bringing away profuse bilious discharges.

After a few hours the febrile excitement (asthenic) had lessened; the pulse down to 90, softer and fuller; the pain and tenderness almost gone; tongue cleaner; and a ravenous desire for food—this latter a very important sign, and almost pathognomonic of speedy recovery.

He was now permitted cool farinaceous diet; iced milk; warm applications persisted in; and this night 12 grs. Dover's powder, there having been but one small passage since 3 o'clock, P. M., unattended by pain or straining, and no admixture of blood. After this evening no other medication was used; his diet simply regulated; rest still in bed enjoined; and a stimulating camphorated liniment applied to belly, covered by single layer of flannel, to guard against changes of temperature.

On the 6th he was allowed some meat broths, and a moderate amount of claret wine, and simply cautioned against excesses to prevent relapse.

This case is presented simply to call attention to another manner of administering Ipecacuanha in dysenteric diseases, and

which has been in vogue many years in the extreme South, where the worst forms and most fatal of this terrible disease exist, and which appears about as near a specific as any treatment ever attained in any class of disorders known, not even excepting the malariæ controlled by the alkaloid of the Jesuit's bark. I am well aware that several modes of administering this drug in the same disease have been brought before the profession, have had their advocates, and been sustained by a long list of remarkable recoveries; yet permit me to remark, that I have tried most of them, and can find nothing for one moment to compare with that above detailed. Of course it is unnecessary, especially in these northern climates, to resort to it in the great majority of cases, most of which may be readily controlled by the usual treatment—opiate, astringent, or otherwise; but in those cases where such remedies fail to respond, and where the patient is succumbing to the violence of the disease, it offers at least one more hold, and if employed fearlessly and vigorously will not disappoint the practitioner. It can be used for children, as well as adults, of course modifying the dose and quantity; and even among sucklings, where there seemed few hopes of recovery, life has been saved.

It is the same treatment as that employed in Martinique, the "Leeward Islands," and tropical latitudes generally, and was introduced into Louisiana by a French physician during the Spanish *régime*, and has become so popular, and so well appreciated that, on the large estates, the planters, taking time by the forelock, have all their cases well in hand before the attending physician can see them. During the occupation of Louisiana, when the provost camps were established in the "coast country," the Federal soldiers would indulge in green corn, unripe fruits and sugar cane, shrimps, fish, etc., washing down such complex messes with commissariat, or fighting whisky, and as was to be expected, few escaped violent attacks of bloody flux. As I had charge of one large camp—part of 31st Mass. regiment—this treatment was invariably inaugurated, and though it rather astonished the strangers to be put through such an apparently violent course of medication, yet, with one exception, and that the result of neglect and carelessness, not one single death occurred, while eight miles below, where many were ill with the same complaint, they were carted out by the score to their last resting place in the bosom of mother earth.

I am sure many a poor fellow, who was "sick unto the death," and who expected to leave his bones in that "far away distant land of the orange and myrtle," often thanks his stars, and as often thinks of the rebel doctor—so they termed me—who sat beside him administering a most awful puking, and trying to console and philosophize with him, while he was expecting every moment to be turned inside out, and throw up his very boots—figuratively speaking; and, at the same time, so great a reputation for success had this treatment obtained, that many came in later days (when they could secure furloughs), even from other parts, to be cured of their sub-acute and chronic varieties, for which it was hardly admissible.

And now, as to the *rationale* of treatment, or the *modus operandi* of this drug, I have not one word to say, leaving the whole to the wisdom and philosophical reasonings of the many readers of the JOURNAL; whether they will not place such effects, in part, to the known properties of ipecacuanha in controlling inordinate and abnormal mucous secretions; or whether due to rapid and forcible elimination through emesis. I only give the facts, gleaned from a large experience—and a happy one too—and at the same time must confess that, throughout, the treatment can in no way be called otherwise than empirical.

ARTICLE V. — *Clinical Lecture.* Delivered at St. Luke's Hospital. By JNO. E. OWENS, M. D., Surgeon to the Hospital (*Thrombosis and Aphasia.*)

John W. Wilson, æt. 32, born in England, a book-keeper, was admitted September 29th, with a simple diarrhœa, with which he was attacked two or three days before admission, and which yielded in 24 hours after the administration of pills, consisting of Acetate of Lead, grs.ii, Powd. Opium, gr.j. I saw him on Sunday morning, when he commenced taking the pills. On Monday morning he took the fourth pill, and the diarrhœa being checked, the medicine was discontinued. With the exception of a very slight debility in consequence of his indisposition, he felt very well and comfortable, and would have been discharged on Tuesday, had he not been attacked, on Monday evening, with a pain in the lower part of the

right leg and the corresponding foot. This, with marked symptoms of lowered vitality, rapidly increased, until mortification set in. The heart and lungs sounds were natural.

Friday, Oct. 5th. The greater part of the foot was of a dark purple color, indeed, in some places it was almost black. At this time the late Prof. Brainard was good enough to see the case with me.

Sunday, Oct. 7th. I received a note from the hospital, saying that the patient had not spoken for an hour. At six o'clock in the morning, he called the nurse and asked him if he intended to get up soon. A few minutes afterwards, the nurse, upon going to the ward, found that the patient mumbled his words so much, he could not make himself understood. Upon calling about 10½ o'clock, A. M., I found that he had a partial paralysis of motion and of sensation of the right side. He could roll the arm very slightly. The left corner of the mouth was drawn towards the corresponding side; he was unable to move the tongue in any direction; the pupils were normal; the skin was in good condition; the pulse 90, heart and lung sounds natural, and appetite good.

Monday, Oct. 8th. There is tenderness over the large arteries, in the arms and legs; the paralysis is decreasing; the patient thrusts out the tongue, and, with some difficulty, moves it from side to side; the left corner of the mouth is no longer drawn to one side; the arm and leg are very feeble. Although he can now use several words, he is unable generally to communicate his ideas. He managed to say, "That'll do." The bowels have twice moved, in response to Pil Cathart Comp. Up to this time, the patient has been taking 30 drops of the following mixture:—Tr. Ferri Chlorid ℥j, Quiniæ Sulph. grs.xxx, three or four times, daily; anodynes in the shape of Ext. Hyoscyami; from 3 to 6 grs., or Morphiæ Sulph. gr.ss., repeated pro re nata; egg-nog, and the most nourishing food.

Tuesday, Oct. 9th. Urine normal; has very good motion of the right arm and leg; heart sounds normal; temperature of two sides of the body about the same.

Wednesday, Oct. 10th. Leg tense, mortification extending; pulse 96. For the last three days, the answer to almost every question has been, "Yes, yes, yes," whether it was a proper answer to the question or not. When restless, the following pill was given:—Morphiæ Sulph. gr.ss., Gum Camph. grs.jj.

Thursday, Oct. 11th. Had a chill this morning; pulse 119; appetite not quite so good; treatment continued.

Tuesday, Oct. 16th. Chill in the evening; ordered additional Whisky, Quiniæ Sulph. grs.jjj, every three hours, Sulphite of Lime, grs.x, in milk, every hour or two, with Morphiæ Sulph. at night; appetite poor.

Thursday, Oct. 18th. Mortification extending; pulse 96. The patient knows his age, (32), but when asked he can only say, "Thir," and shows vexation from his inability to answer perfectly. He was, you'll remember, born in England, and when I told him that he was born in France, he said, "No, no." The Quinine pills were discontinued, and the mixture of Iron and Quinine substituted.

Friday, Oct. 19th. Had a chill this morning; pulse 150; appetite failing; in other respects the same. Friday evening, pulse 96.

Saturday, Oct. 20th. The double-flap operation was performed above the knee. After the operation we gave the patient Morphiæ Sulph. gr.i., Gum Camphoræ, grs.ij.

Sunday, Oct. 21st. He rallied very well yesterday, from the operation; but did not sleep till about four o'clock this morning; pulse 130 and feeble, hands cold and clammy. Prescribed egg-nog, beef tea, soft-boiled eggs, and ℥ss. three or four times daily, of the following: Tr. Ferri Chlor. ʒiij., Quiniæ Sulph. ʒss., Sacch. Alb. ʒij., Aquæ ℥vj. et ʒv. The patient has slept a good deal since four o'clock. The nose looks pinched; face is much thinner, since yesterday.

Monday, Oct. 22nd. Patient continued to sink since yesterday, and died at 1½ P. M.

Gentlemen: At our last meeting, so much time was taken up with the operation, that we were obliged to defer, till to-day, our comments upon this very important and interesting case. Had the patient been a man of advanced age, or had he been a rheumatic or gouty subject, or excessively debilitated from long continued wasting disease, the condition under which he labored, and which has terminated so fatally, would have lost much of its rarity, and our knowledge of its pathology might have been more satisfactory. But when we consider that the history of this case does not point to any of the above conditions,—that he was splendidly developed and well nourished, we must look for other and more

insidious causes, and congratulate humanity, that, at least, some of our most fatal diseases may make most extensive ravages, and entail upon us comparatively little suffering. Our patient seems to have had, throughout, only about three days of real suffering. Let us, once more, glance at the symptoms presented by this case, together with its history, and see how far a consideration of them may lead us to a correct diagnosis. The diarrhœa, I think, we may set aside, as having no bearing upon the case whatever.

On Monday evening, Oct. 1st, the patient was attacked with a pain in the leg and foot. This pain came suddenly and was tolerably severe, during the evening and night. On Tuesday when I saw him it had increased, so that anodynes were necessary to allay it. The foot and lower part of the leg presented a dusky appearance, the temperature was much lowered, and the blood coursed very sluggishly and lazily through the veins on the dorsum of the foot. When a part is about to undergo the process of mortification, there is generally an aggravation of all the previous symptoms. The pain and sensibility become more intolerable, the dusky hue changes to a mottled appearance, the tension becomes greater, and here and there blisters arise, which contain serum more or less tinged with the coloring matter of the blood. Now, gentlemen, when a limb presents this appearance, its nature is unmistakable, and unless the cause can be promptly removed, the death of the entire part is inevitable. It may be well, here, to mention a case illustrative of the fact that a part, presenting the appearance just described, may return to its normal condition, if the cause be promptly removed. For the facts of the case, I am indebted to Prof. Andrews. From some cause, which I do not now remember, an arm became enormously swollen. The tension was so great, that pressure upon the arteries of the limb, so interfered with the nutrition of the part, by cutting off the circulation, that mortification was about to commence, or indeed, if I remember correctly, it had in some parts of the limb already taken place. The part was of a dark purple, cold and blistered. Free incisions into the limb promptly removed the cause, the circulation became re-established, and the process of mortification stopped. So by the timely action of the experienced surgeon, a limb was saved—indeed, perhaps the patient's life. Physicians may boast of their alteratives, but it has been said that none of them are equal to the scalpel.

The complete cessation of vitality is denoted by a purple or black appearance of the part, the absence of all heat and sensibility, and a peculiar fetid odor. In general, there is more or less crepitation upon pressure, but in this case I could not detect any. The constitutional disturbance, which is generally of a typhoid character, was in this case very slight. The pulse, which usually in such cases runs up to 140 or 160, except on two or three occasions, and then only for a short time after the chills, did not go above 96.

But, gentlemen, were you called to a case of this kind early, what would be the nature of your examination of the part? In the first place, you must inquire whether the pain, which came on so suddenly in the leg, exists in any other part of the body. You find that it does not. It is not likely, then, that you have rheumatism to deal with. Taking in the general appearance of the leg, you will, either at your first or your second visit, notice the dusky color of the foot and more or less of the leg. You press upon the surface and find that the blood, which has been displaced by the pressure, returns but very slowly and lazily to the spot, and in the same manner does the blood course through the veins upon the dorsum of the foot. Having now taken note of the pain, and the character of the local circulation, your attention must be directed to the temperature. The toes, and perhaps the whole foot, are quite cold. The part will likely pit on pressure. You will at once determine from this condition of sluggish circulation, lowered temperature, and pitting on pressure, that the vitality of the part is very much lowered. Now when the vitality of a part is excessively depreciated, the part may die. Your attention would then be directed to the arteries through which the limb receives nourishment. These vessels you may examine very easily, if there is not much swelling. The arteries to be examined in the foot are the dorsalis pedis, midway between the two malleoli, and the posterior tibial, where it passes, immediately behind the internal malleolus.

Gentlemen, if you find the above condition existing, and no pulsation in these arteries, there is not the shadow of a doubt as to the nature of the case. You have diagnosed, then, approaching mortification, and if you are a young man, just at this point, although you may thoroughly understand the nature of the case, you will have a consultation. The prognosis in such cases is unfavorable.

Being a young man, its result might be laid at your door. Hence, it is best to divide the responsibility of these cases, otherwise your future prospects might be sadly impaired. The mortification, of which we have been speaking, is, however, only a symptom of some deep-seated and insidious disease. Our object will next be, to find out the nature of this disease—the cause of the gangrenous leg. The causes of mortification of an extremity are, defective nervous energy, constitutional debility, mechanical obstruction, ergot of rye, traumatic injuries, and diseased blood vessels. Now let us endeavor to select from this list a cause for our patient's trouble. In paraplegia, large sloughs sometimes occur on the nates and about the gluteal region and hip. These are often mistaken for bed-sores; but I do know that these sloughs occur in regions where there is not sufficient pressure to cause them. Such a condition has been lately exemplified in a patient now in the hospital. In such cases the application of a blister is frequently followed by extensive sloughing. According to Gross, the division of the peroneal nerve, in the removal of a tumor, has been followed by mortification of the small toes. These are examples of mortification from defective nervous energy. It is true that the patient had a hemiplegia, an example of defective nervous energy, but this could not have caused the gangrene, because the paralysis did not occur until nearly a week after the mortification had set in. There was no injury to the nerves of the part. Defective nervous energy did not cause it. Neither was it caused by constitutional debility, for you may all remember the splendidly developed shoulders and chest, and the well nourished face. By mechanical obstruction, we mean tight bandaging, inordinate swelling, pressure by a tumor on the blood vessels, ligature of an artery, etc., none of which existed. In some parts of Europe, mortification of the fingers, indeed all the remote parts of the body in some cases, has prevailed, endemically, from the use of rye bread, in the flour of which was mixed the secale cornutum, or ergot of rye. It is very rare in this country. I am not sure that there is a single case. There is nothing in the history of our case to point to this cause. This species of mortification is dry, black, and free from odor; whereas that of our patient was moist, and very offensive. Of course, in this case, we must also set aside traumatic injury. In seeking a cause for this trouble, let us for a moment consider

diseased blood vessels. The blood vessels, I need scarcely tell you, are the arteries, veins and capillaries. Phlebitis, or simple inflammation of the veins alone, has never in my experience led to mortification of an extremity, nor have I ever read of such a case. What it might do were time allowed, I am unable to say, but such cases usually run a rapid course and end unfavorably from pyæmia. We have now reasoned somewhat by exclusion, which has left us, as a cause of the mortification in our case—diseased arteries. In old age, mortification sometimes takes place from ossification of these vessels, but you must remember that our patient was only 32. Had he been afflicted with chronic gout or rheumatism, there might, possibly, have been a calcareous degeneration of the coats of the arteries, or of the heart, even at his age. If the patient has had one attack of rheumatism you will be led to an examination of the blood vessels and heart. These deposits usually occur about the valves of the heart and aorta, leading to more or less functional disturbance of this organ, and perhaps always to abnormal valvular sounds. The ossific deposit may often be felt in the radial arteries at the wrist. His heart sounds were, however, normal, and the arteries at the wrist felt soft and natural. Our idea of the pathology of the case was not, then, one of ossific deposit in the walls of the arteries.

Now, gentlemen, I have been telling you what was not the pathology of this case, and as far as my time would permit, the manner of tracing the real cause; let me now tell you what was the cause of it. Rudolf Virchow, the distinguished pathologist of Berlin, has described in his book upon Cellular Pathology, an affection, which he terms "Thrombosis"—an affection which seems not to be thoroughly understood, but, upon which much new light must very soon be thrown. Thrombus means a clot, and is derived from the Greek word, *thromboa*, which means to coagulate. The whole process I told you is comprehended under the term Thrombosis, by which you will understand that the artery, or vein, or indeed both of them, are plugged up with a clot of blood. This was our diagnosis before death, and the only satisfaction that now remains is the confirmation of our diagnosis by the pathological specimen—part of the popliteal artery and vein, both of which are occluded by coagula. The cause of Thrombosis is, as yet, obscure. The autopsy, in this case, does

not seem to throw much light upon the subject, especially as we were not permitted to examine the body as thoroughly as desirable, because of the near approach of the hour of burial. The vein is inflamed, and the artery heightened in color. Whether the inflammation led to the coagula, or the reverse, I am unable to determine positively. I am inclined to the former view of the case. Since the patient's death, the woman with whom he boarded told us, that she frequently heard him complain of soreness and pain, when he pulled on his boots. This seems to favor the idea of a pre-existing phlebitis. Virchow, however, says: "That a phlebitis affects the walls, and not the contents of a vessel; that, in large vessels, the most different layers of their walls may enter upon every phase of inflammation, and yet all the time their channel remain entirely unaltered; that even abscesses may form, which cause the walls to bulge on both sides, without any coagulation of the blood ensuing in the cavity of the vessel." It does not seem to me that this latter condition could exist without great danger of Thrombosis. Such an eminent authority as Virchow, however, is entitled to much respect. Pathological research only will reveal the subject in its true light.

There is one other point to which I would call your attention; and that is, to the propriety of making incisions in the mortified limb in order to let the poisonous and irritating fluids drain off. This was suggested at the consultations, but it was decided to substitute a blister upon the calf of the leg, that more or less of the poisonous fluids might pass off in that way. This practice, though quite common in this class of cases in France, has not, it seems, obtained in this country. An examination of the limb has settled the question in my mind that it is proper to make incisions and let out the pent-up secretions. When I opened the leg, nearly a quart of dirty, sanious, highly offensive and irritating fluid came away, which, when left in the limb, I am satisfied, does harm. This quantity remained in spite, too, of considerable fluid having drained off through the blister. Do not hesitate, then, to make incisions instead of blistering. The leg was amputated above the knee, without waiting for a line of demarcation, because it was thought that amputation would give the patient the best chance for recovery.

Autopsy: Lungs hypostatically engorged; liver, heart and kid-

neys normal in appearance; circle of Willis very much attenuated; the brain was softened; but we will say more of the latter when we come to speak of the paralysis and of the aphasic condition of the patient.

(Continued in the next.)

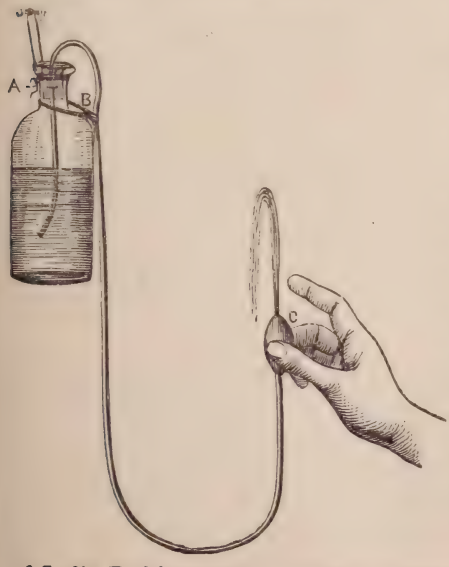
ARTICLE VI.—*Nasal Catarrh.* By MERRITT F. POTTER, M.D., Kaneville, Kane Co., Illinois.

The wide-spread prevalence and obstinate character of Nasal Catarrh, especially in the Northwest, seems almost to entitle it to a place among the "Opprobria Medicorum." The numerous remedies so conspicuously displayed in the newspapers, all claiming the merit of therapeutic infallibility, demonstrate both the extent and obstinacy of this disease. Consisting, as it does, of a chronic inflammation of the mucous membrane of the nasal cavities, the treatment required should be mainly local, and the failure to cure results not so much from ignorance of the proper remedy as from a want of a suitable method of applying it.

The practice of drawing medicines into the nasal cavities by inspiration is so extremely disagreeable as well as difficult, often strangling the sufferer, by entering the larynx, that the cures effected in this way are indeed "few and far between." The Catarrh Syringe is designed expressly for the topical medication of the nasal cavities, and doubtless many cases are greatly relieved by its use. But it should be used by the physician only, and requires so frequent and long continued use that many of those who adopt it for a while are soon tired of a course of treatment which requires so much time and labor. Besides, the liquid is thrown into the nasal cavities so rapidly and with so great force as to be extremely disagreeable to the patient, exciting sneezing and copious lachrymation, and failing to cleanse the morbid tissues because the liquid remains too short a time in contact with the affected part. The discovery by Prof. Weber, of Germany, in 1847, that liquid injected into one nostril through a closely fitting plug, would after filling the cavity, flow around the septum of the nose and escape from the other nostril without entering the throat, was of no ordinary importance, as foreshadowing a more rational

system of therapeutics for this disease, and the subsequent invention by Prof. Thudichum of the device known as the Thudichum Douche, utilized the discovery of his German predecessor, and opened up a new avenue for the application of remedies to a region which, previously, had been nearly inaccessible to topical medication.

The advantages of this apparatus in treating morbid affections of the nasal organs, are very great. By its use it becomes an easy matter to thoroughly wash out the entire nasal cavity, completely deodorizing and disinfecting it, to remove all offensive secretions which accumulate in it, and to apply any remedial agent directly to the seat of the disease, arresting morbid action and disposing the diseased organ to take on the healing process. Valuable as this invention truly is, its bulk and liability to be broken operate to prevent its general adoption. What is wanted is an instrument compact and portable, so that it can be carried in the saddle-bags or pocket, and adapted for immediate use in any apartment without requiring special shelf room, or any fixtures not found in every dwelling. Such an apparatus seems to be represented in the accompanying cut.



C is a small hollow India Rubber bulb, open at both ends, and about the size and shape of a butternut. It is attached to one end of a small tube of the same material, about four feet in length. The other extremity of the tube is inserted in an ordinary pint or quart bottle, to which it may be attached in any convenient manner; a small elastic band looped around the tube and encircling the neck of the bottle, as shown in the figure, is sufficient. A flat piece of India Rubber, with a slotted opening through it barely large

enough to allow the passage of the tube, and inserted in the neck of the bottle, will also retain the tube in place as shown in the cut. If the tube is passed through the loop by which the bottle is suspended, the tension of the loop will be sufficient to prevent the tube from slipping in ordinary cases. To use the instrument, it should be filled and suspended a little higher than the head, to a hook or a common nail. Next compress the bulb between the thumb and two middle fingers of one hand, so as to flatten it and bring the two opposite sides in contact. Press the index finger tightly over the outlet of the bulb and hold it there while the bulb is allowed to expand. The expansion of the bulb causes the liquid to flow through the syphon tube. The finger may then be removed and the bulb applied as a tight-fitting plug to one nostril. The liquid will flow into the nasal cavity of one side till it is filled, and then flowing around the septum of the nose it will be discharged by the other nostril. No possible danger of the liquid flowing into the Eustachian tube, or any other unpleasant effect, can ever result from this operation, provided the liquids are properly prepared and the patient be careful to adopt the simple precaution to *keep the mouth open* during the operation.

If a more forcible jet of the liquid is desired, to dislodge accumulations of adhering sordes, it may be produced by pinching the tube with one hand, to prevent a reflux toward the bottle, and forcibly compressing the bulb with the other, while applied to the nostril.

After using the instrument the liquid remaining in it will all flow back into the bottle if the tube is drawn above the level of the neck. It can then be coiled around three fingers and secured by an elastic band, or tied with a string and carried in the pocket. Any ordinary bottle is suitable to use, provided it is cleaned and a loop two or three inches long be attached to the neck by which to suspend it to a nail.

Of the various remedies in use, common salt, of the strength of about one and a half ounce to the quart of water, of the temperature of ninety-eight degrees, is of more value than all other preparations. Great care should be observed in getting the proper temperature, and the operation should be repeated, in severe cases, three times a day, passing the liquid in *both* directions, and using about one pint each time.

The bulb will fit a nostril of any size, and the material of which it is composed is secure against all danger from breakage. The instrument can scarcely be injured by any ordinary accident, and without any particular care in its usage will last for years.

May 10, 1870.

Original Translations.

Article I. — *Legros and Onimus upon the Influence of Electric Currents upon the Nervous System.* From the Journal de l'Anatomie et de la Physiologie. (Robbins.)

[Continued from June No., 1870.]

§ 6. — *Derived Currents.*

We have stated how derived currents are formed, and how they were manifested in the organism. However relative to the direct current, their action is very feeble, and it may be said, in general, that their influence in man never occasions the disappearance of that of the direct current. It is not so, however, in experiments made upon animals.

Let us suppose a sciatic nerve traversed, during a long time, by a direct current, and that, at each closing of the current, we may have obtained a contraction, and nothing at the opening. We shall see, in proportion as the nerve loses its excitability, the phenomenon become inverse, that is, the contraction shall take place at the opening and not at the closing. The reasons for this phenomenon are as follows: A determinate portion of an electrized nerve being exhausted, the direct current no longer excites this portion, and, consequently, no longer determines contractions at the moment of its closure. But, at the same time that a direct current is established in the same portion of the nerve, a derivative current is formed, which is directed from the muscles of the thigh to the nerve. This current action of nervous terminations, and, consequently, upon nerves not exhausted, will determine an excita

tion of these nervous filaments, and as it is ascending, the currents will take place at the opening, and not at the closing.

One might be astonished at the considerable action of derived currents in the organism, and we have stated the error which we may have committed, by considering as reflex the contractions provoked by derived currents. It is important to recall, here, that nerve, although a conductor of electricity, is, however, a bad conductor, and that explains to us why, when the resistance to the direct current is very strong, the derived currents assume an influence so considerable.

In order that the derived currents may thus change the order of the contractions, it is necessary, as we have said, that the portion of the nerve traversed by the direct current should be no longer excitable. Indeed, by irritating this portion of the nerve by mechanical or chemical excitants, contractions are no longer obtained from the appearance of the influence of derived currents.

MM. Longet and Matteucci have established the fact that, in electrizing mixed nerves, with a direct current, contractions were obtained at the closing, and with an inverse current at the opening; whilst in electrizing the anterior roots, that is to say, nerves purely motor, contractions took place at the commencement of the inverse current, and at the interruption of the direct.

MM. Martin Magron and Rousseau, whilst determining this fact, believe that they could explain it by derived currents. This objection is very serious, but we should add, that in the experiments of MM. Longet and Matteucci, it was necessary to take into consideration other conditions. Thus, M. Claude Bernard has observed, that the law of contractions is not the same, when the experiments are made upon mixed nerves separated from the nervous centre, or upon these same nerves intact and communicating with it. In this case, as in the experiments of MM. Longet and Matteucci, the contractions with an inverse current occur at the closing, and not at the opening.

If the facts observed by MM. Longet and Matteucci are not rigorously exact, in order to distinguish mixed nerves from nerves purely motor, it is then equally difficult to explain them by the single influence of derived currents.

It remains for us to speak of currents of polarization; these have the same cause as the secondary currents, only we distinguish them

in this, that they occur only at the moment of the cessation of the current, whilst the secondary currents exist during all the time that the current traverses the tissues.

§ 7.—*Currents of Polarization.*

In the physical part, we have indicated the nature of currents of polarization. We have referred to experiments made upon animals both warm and cold blooded, and have arrived at this conclusion, that in an organic tissue traversed by a current, there is formed, at the moment of the cessation of the electrization, a direct current in an inverse direction. The experiments of Matteucci, which we have referred to in full, confirm this proposition, and give the explanation of these facts. Lastly, we have likewise instituted the following experiment, which is a new proof of this phenomenon: We immerse in two vessels, filled with distilled water, the extremities of a very sensitive galvanometer; then, by plunging the two hands into these vases, we observe, sometimes, that the needle remains at zero, at others, that it deviates slightly, either to the right or to the left. This deviation is always slight, but, nevertheless, it must be recognized.

Withdrawing, then, the hands from these two vessels, we plunge them into two others, which contain the poles of a continuous current apparatus. After having transmitted the current during a few seconds only, we replunge the hands into the vessels in contact with the galvanometer; immediately the needle is deflected thirty or forty degrees, or even more, and always in a direction opposite to the deflection which it would have experienced if it were influenced by the current used. It is possible, by always placing the same hands in the same vessels in communication with the galvanometer, to obtain a deflection in the opposite direction, if, the first time, the electrization is effected by a current going from right to left, and the second time by a current from left to right. The deflection of the galvanometer is, therefore, really the result of electric currents which continue after the electrization, and which occur in an inverse direction to the current employed. The deflection of the needle is so much the stronger, as the current has been more intense, or applied for a longer time. It occurs rapidly, and is not of long duration. It may be obtained uni-

formly if care is used to wipe the hands promptly before placing them in contact with the conducting wires of the galvanometer.

There is formed, therefore, at the moment of opening the current, another current in the opposite direction to the primary current.

This proposition will account for several phenomena which we have indicated in this chapter. We know, indeed, that when a current is transmitted through a galvanoscopic frog, there is obtained, at the opening of the circuit, a contraction only in the limb which has been traversed by the inverse current. This contraction is so much the stronger, as the passage of the current has continued longer, and as its intensity has been greater. Frequently this contraction becomes a true tetanic state.

Let us remember, that, with the weakest currents, it is the direct current which first determines contraction, which demonstrates that it is this which acts most energetically upon motor nerves. Now, when a nerve no longer produces contraction at the moment of the closure of an inverse current, but, on the contrary, produces it at the opening, it may be admitted that the contraction is due, not to the rupture of the inverse current, but to the action of the direct current of polarization, which is formed at the moment of the opening of the inverse current. This explanation, which was given for the first time by Matteucci, appears to be very exact, and we believe it applicable to the majority of cases.

On the other hand, whilst the motor nerve is influenced in the most energetic manner possible by the descending, the sensory nerve is excited especially by the ascending, current. If, then, a descending current be applied to a motor nerve, it is at the moment of the passage of the current that the nerve, stimulated to activity, will provoke muscular contractions. With an ascending current, as we have just seen, there is formed, at the opening, a descending current, and it is, in reality, at this moment that the contractions occur. Upon the sensitive nerve the ascending current will act at the moment of its application, and moreover, at the closing, reflex actions and evidences of pain are manifested; as to the descending current, it will not act, but at the moment of its opening, or at this instant there is produced an ascending current; and moreover, this is exactly what occurs, for we have already stated that the

phenomena of pain are manifested especially at the cessation of the direct, and at the closure of the inverse, current.

The tetanic state sometimes apparent in the paw which has been traversed, during some minutes, by an inverse current, is likewise due to partial currents which are produced after the electrization. The proof of which is, that by cutting the nerve between the two poles, that is, by preventing the formation of secondary currents, this tetanic state never occurs.

The existence of these currents of polarization may be equally well established in man. We have, indeed, seen that by applying to the upper portion of the cord a sufficiently energetic ascending current, phosphenes appear, especially at the closure of the current, whilst, by employing a descending current, it is at the moment of the opening that the most intense phosphenes are produced. This fact seems explicable only by admitting, that at the moment of the rupture of the descending current an ascending current of polarization is formed, and as it is the ascending current which exercises the greatest influence upon reflex phenomena, it is this, probably, which is produced at the moment of the opening of the descending current, acts even as far as the brain, and likewise the optic nerve.

§ 8 — *Difference of Excitability produced by Changes in the Intensity and Rapidity of the Current.*

Every change in the intensity of a current produced during the contraction of a muscle, is so much the stronger as the intensity of the current is greater. This proposition is only true up to a certain maximum, beyond which variations in intensity no longer produce any excitation. Upon this point we made the following experiment: through a frog, prepared after Galvani's method, the feeble current of Daniel's pile was passed, and whilst this current was maintained, if the influence of a second pile was added, contractions were still manifested at the closing. But if the current of two piles was passed in a continuous manner, the action of two, four, etc., other piles might even be added without exciting contractions: the limbs of the frog remain motionless. This may be readily conceived, for the excitation of the nerve has attained its maximum by the influence of the first two piles, and it can no longer be augmented by stronger currents. This fact demonstrates

that in practice, when the excitation of a peripheral nerve is effected by a current of a certain intensity, it is useless to increase the energy of the current, for the effect would be no longer considerable, and there would be only the disadvantage of occasioning greater pain. In this same experiment, if, in place of transmitting the current in the same direction, we first employ a current from two piles, which is passed in a continuous manner from left to right, for example, and then transmit from right to left a current of equal force, or even two, three times weaker, a series of contractions will be effected, especially in the limb traversed by the ascending current. This fact demonstrates that a current, even much more feeble than another which already affects the nerves, occasions still further contractions when it is transmitted in an opposite direction, probably because it acts upon different nerves. The primary current being descending, for example, will act upon motor nerves, and an ascending current being applied during the passage of the first, to the same limb, will produce excitation of the sensory nerves, and may occasion reflex actions; the action of currents upon motor nerves is, therefore, to a great extent independent of that upon sensory nerves.

Every variation in the intensity of a current, produces in the nerve an excitation by as much stronger as the variation is more rapid (Dubois-Raymond). It is possible, then, by augmenting only with extreme slowness, to put in action upon the nerves a current somewhat intense and yet without producing contractions. To this end, it is necessary, without causing the slightest interruption, to add gradually the force of a new element. By this means the initial shock is avoided, which is always disagreeable, and which sometimes frightens the patient. This process is especially useful when it is desired to electrize the head or the cervical regions, for thus neither phospenes nor confusion will be occasioned. As at the opening of the current, a current is formed in an inverse direction, and just as strong as the current used has been intense; it is likewise necessary to diminish the current gradually; thus the shock of the rupture of the current and of the current of polarization will be avoided. It is possible, in this case, either to slide the reaphore, slowly, upon the adjoining parts when the epidermis is not moistened, which weakens the force of the current, or to diminish the number of the elements without causing any interruption at the

moment when an element is removed; this result may be accomplished by means of a mechanical artifice which has been referred to in the continuous current apparatus.

In applications to the head, it is important never to arrest the electrization abruptly, for when this precaution is neglected, the patient experiences a shock, and quite a strong vertigo. The vertigo should especially be avoided, for it is impossible to be guided by what occurs during the moment of electrization, the vertigo in most cases appearing only at the moment of the rupture of the current.

§ 9. — *Different Opinions Expressed about the Influence of the Direction of the Currents.*

It would be impossible in this chapter to quote and to discuss all the opinions which have been expressed about the influence of electrical currents, when they act directly upon nerves; we shall investigate only the more recent, and those which have been sustained by authorities most justly celebrated. M. Claude Bernard, in his *Leçons sur la physiologie et la pathologie du système nerveux*, gives the following conclusions:*

"*a.* A nerve under its normal organic conditions, fitted to transmit voluntary excitations, when excited by galvanism makes but a single contraction, which occurs at the moment when the current is closed, whatever may be its direction.

"*b.* The nerve under these conditions, resembles muscle which never contracts but at the entrance of the current, whatever may be the direction of the latter.

"*c.* So that the actions of derived currents, so important to be considered on nerves separated from the individual, are without influence upon the nerve in its physiological state."

Upon a subsequent page, M. Claude Bernard, again adds the following conclusions, which are, so to speak, but the corollaries of the previous proposition:

"*d.* The phenomena which the nerve presents under the influence of an excitant, differ greatly, according as it may be contused, wounded, cut, or fresh, and in its normal relations.

* Page 185.

"*c.* All that has been said of the different directions in which contractions may be occasioned, does not apply to the healthy nerve, which always offers the same reactions, whatever may be the excitant to which it may be submitted, and whatever may be the mode in which this excitant be applied."

Our own experiments confirm many of the conclusions of M. Claude Bernard, and from the beginning we have had in view the proposition *d*, which is very important and which explains the majority of the contradictions occurring between different experimenters. We also reached this conclusion, that the action of derived currents is manifest only when the portion of the nerve traversed by the current is no longer excitable, which approximates closely to conclusion *c*, of M. Claude Bernard: "The actions of derived currents, so important to be considered on nerves separated from the individual, are without influence upon the nerve in its physiological state." Our conclusion differs from that of M. Claude Bernard in this, that we believe that, when the nerve is fresh and very excitable, the derived currents have no very manifest influence, whether the nerve be separated from the organism or not. Moreover, it is certain, as experiments made with the galvanometer prove, and as the phenomena of phosphenes and of metallic taste demonstrate, that derived currents exist in every case, and that they exert an influence more or less considerable.

As to the propositions *a*, *b*, and *c*, we believe them incomplete: for as we have already said, it is necessary to distinguish the cases in which nerves alone, from those in which nerves and muscles are acted upon. If in this last case, the contraction occurs especially at the moment of closing, it is not less true that the direction of the currents exhibits a very marked influence, and that under certain conditions there is a strong contraction at the opening of the current. We cannot animadvert sufficiently to this fact: that it is manifest that the direction of the currents has great influence upon the order and the energy of the contractions, and that this is important to be considered by the physiologist and the physician.

We shall perceive as we study pathological cases, how often this distinction is capital, and in a purely physiological point of view, we revert for these facts to paragraph (§ 1) one, and (§ 2) two, of this chapter, where we point out very marked differences, depending upon the directions of currents. This difference has been

established since the time of Aldini and Volta, and we assume it as premise for the deduction of the laws which we have enunciated, not only from facts whichwe have observed, but, in addition, from the very exact and minute investigations of Matteucci.

Marianini (1), Matteucci (2), Remak (3), and several other authors, have asserted that the ascending current acts most energetically upon motor nerves, and the sensitive nerves are excited more strongly by the descending current, admitting, at the same time, that paralysis is a fact analogous to what we have been able to produce by constant currents of nerves having always the same direction; they have hence concluded that paralyses of motion should be treated by ascending, and paralyses of sensation by descending, currents. From the experiments which we have cited, it is, on the contrary, the opposite direction which should be preferred in each case.

Matteucci states, at the same time, that by means of constant currents, tetanic contractions may be arrested in a frog poisoned by strychnia, and that in this case supervenes without any contractions having taken place.

In order to accomplish the object of this experiment, says Matteucci, the ascending is preferable to the descending current, *the former producing less contractions at the beginning.*

This last phrase gives us the explanation of the erroneous ideas, in our opinion, of these different authors. It is true, and we have indicated it, that the ascending current determines in certain cases fewer contractions than the descending; but this difference is only accurate when the reflex actions are diminished or abolished. At the end of a certain time, in the case of tetanus, the ascending as well as the descending current, ought to induce an arrest of the tetanic contractions, for they both maintain the nerves permanently in the molecular state, which remaining constant can determine no muscular contraction. Excess of irritation can even produce this effect, but it seems to us dangerous to endeavor, as Nobili desired, to deaden the nerve in tetanus, it is better to act upon the sensitive nerves, and to make use of the current which in its order

(1) Marianini, Mémoire lu à l'Athénée de Venise. (*Annales de Chimie et de physique*, 1834.)

(2) *Traitè des phénoménes Electro-physiologiques des Animaux*, 1844, p. 270.

(3) *Galvanothérapie.* Paris, 1866, p. 23.

prevents the action of sensitive nerves, and consequently causes a cessation of reflex contractions; now, this is the descending current.

In 1838, Matteucci, upon these theoretical ideas, attempted, with Doctor Farina, to cure a case of traumatic tetanus, by means of a constant current from a pile of thirty or forty elements. *An ascending current* was directed from the sacrum to the nucha. The tetanic contractions ceased, but the patient died nevertheless. Now, by this method of electrization, far from diminishing the excitability of the cord they increased it, and if the cure did not take place, it was due entirely to this permanent excitation of the cord, an excitation appears certainly to us, although the tetanic contractions had ceased.

We shall return to this subject when we come to discuss the action of electric currents upon reflex actions; but henceforth it is possible to judge the influence of physiological experiments upon therapeutics. It becomes, therefore, a matter of paramount importance to determine clearly, the physiological properties of different modes of electrization, and it is because we are persuaded of the truth of this proposition, we deem it useful to insist continually upon these facts, at the risk of being guilty of frequent repetition.

Review.

Obstetric Operations, including the Treatment of Hæmorrhage. By Robert Barnes, M. D., Lond., F. R. C. P.; *with Additions*, by Benjamin F. Dawson, New York City. *First American Edition.*

This book was handed us a few days since for perusal, but our time has been so limited, that we have been forced to run through it in a very superficial, and therefore unsatisfactory, manner; yet it is one of such transcendent merit, we could not refrain from devoting a few moments to speak of its many excellencies, and to give our just mead of praise in favor of its distinguished author.

There exists certainly no medical work in the English language, treating of the various and complicated operations of midwifery; defining so clearly and truthfully the conditions calling for interference; and explaining in such practical terms the mechanism of abnormal labors,—to compare with this; and we can safely affirm that there can be found no surer friend, nor safer guide to the obstetrical physician, and especially to the younger and less experienced members of our profession, who may wish to make this branch an especial study.

The first four or five chapters give us a selection and description of the instruments needed to make up the bag of the accoucheur; their modes of application, and the unnatural states demanding their uses—the lever as a valuable aid in facilitating labors with head presentations; the forceps, not only as an instrument of extraction and compression, but possessing immense powers of leverage, etc. And here he interposes his objections to the short single-curved forceps, as being difficult of introduction, being obliged to seize the head in its transverse diameter, regardless of position or the curves of the pelvis; as tending to lacerate the perinæum even in the hands of the most skillful; almost certain to bruise or tear the edge of the sciatic nerve by the posterior or sacral blade, thus giving rise to more or less protracted paralysis of the leg; and lastly, by pressing on the portio dura as it emerges from the temporal bone, very often paralyzing the side of the face, leaving a staring eye, and inability to suck. His objections are well taken, and his arguments in favor of the double-curved long forceps, sustained by a large and ripe experience, will carry conviction to every mind. This latter instrument is applied on an entirely different principle; adapting itself to the curves of the pelvis, one blade in each ilium, it grasps the head in any position, and by assisting the action of the uterus, *not supplanting it*, gradually extracts from brim to outlet. A description is given of its application to first-coming and after-coming heads, every step of the operation of extraction fully explained, and he winds up by saying that the mortality from its use is *nil*, death occurring only when it is applied too late, and that, therefore, the argument of *post hoc, ergo propter hoc* cannot avail here. Next in order, we arrive at face presentations, one of the best chapters in the book, where the subject is thoroughly discussed in all its bearings,

and its importance will be fully recognized, when we state, in conjunction with all physicians of large practice, that there can occur few complications, engendering such prolonged labors, so painful, and often dangerous to the mother, and so wearisome and harassing to the obstetrist. Chapters VIII and IX are devoted to the multiple agencies producing dystocia, from the various deformities of the pelvic bones, to every faulty condition of the soft parts, and then we come to version, with a highly interesting philosophical explanation of abnormal presentations requiring it, and the bi-polar method of assistance, its great utility in rectifying mal-positions, cephalic and pedalic, and the great range of its application. The bi-polar version was first practiced by Wigand, d'Outrepont and others, with both hands externally applied, whereas the present method, one hand internal and one external on the uterine tumor, was fully elaborated and introduced by Dr. Braxton Hicks, and is now considered of such value, that many cases before impossible to version, can be readily managed by its aid. We here call to mind, witnessing many years ago, in cases of protracted labor, the "Old Grannies" of the plantations, often hop astride their lying-in women, and by a combined sliding, jogging and pressing motion, like a boy on his hobby-horse, endeavor to hasten the expulsion of the fœtus, while the recipients of such gratuitous favors would yell and howl in their agony, alternating with expressions of religious fervor and prayer, not unlike, however, their white congeners; for, in times of pain and peril do we not all become so very good? as explained so racily in that old well-known couplet:

> "When the devil was sick, the devil a monk would be,
> When the devil was well, the devil a monk was he."

He places the limit of turning at 3.25″ to 3.75″ conjugate diameter, when at the latter point it comes in competition with the forceps, and below the former, begins to encroach upon the domain of craniotomy, etc. In performing version, he recommends taking the knee to the foot, and always the *farther*, or *opposite* one, as traction upon it rotates the fœtus upon its long axis, and it comes down more easily.

Craniotomy and cephalotripsy are taught *in extensô*, presenting, however, no new features, until we reach the author's method of embryotomy, performed by his "wire écraseur," manufactured by

Weiss, and endowed with an archimedean screw and windlass. The application of this instrument is easy, the whole force of the operation is expended upon the child, thus avoiding the contusions and lacerations of the mother, and the head can be so reduced—by removing an occipital segment, and also a facial—as to pass an antero-posterior diameter of 1.00″; then the remainder, by lopping off the arms, and eviscerating the chest and belly. He is thus enabled to spare the mother in many instances the dangers of the cæsarean section. In regard to this last, he views it both in its moral and material aspects, leaning ever to the side of humanity, handling the mother with all the tenderness of a noble and generous nature, and by his sound logic sweeping away many of the old guides and landmarks of sacrificial midwifery. He takes the limit at 1.75″, and generally in those cases of osteomalacia, where the bones will not open up under pressure, and where the transverse and diagonal diameters offer insufficient accommodation for a narrow conjugate. He believes it is rarely called for in rickety pelvis; occasionally when craniotomy may have failed; in some cases of rupture of uterus; malignant disease; death of mother, etc. The induction of premature labor is presented to us as a very important subject, and necessitated, of course, by those conditions where a fully developed child could not be brought into the world without a sacrifice of life. In cases of contracted pelvis, the conjugate diameter 2.50″, the development should not exceed 250 days, and we should rather run the risk of a non-viable child; and with still smaller diameter, the operation becomes more imperative, though the birth may require extraneous interference. That a child may be viable, and stand some chance of surviving, he reckons the pregnancy from the day after the last menstrual epoch, counts 230 days, and adds 20 more as a margin of safety, thus leaving one full calendar month for the complete growth of fœtus. Among the means of inducing labor prematurely, he describes the many modes of cervical dilatation, from the vaginal douche of Kiwish; the injections *in uterô* of fluids by Lazarawitch; of gases and of air; tents; irritation by various "diastaltic persuaders;" and finally, best of all, the immediate method by his "hydrostatic dilators." In cases of great emergency, dilatation and delivery can be secured anywhere from one to six hours, the caoutchouc dilators acting upon the principle

of the "bag of waters," exerting a steady equable pressure, elastic and sure to relax the most rigid os. The author's method of procedure challenges our attention. He divides it into two stages; the first, the *provocative;* the second, *accelerative;* and when the operation is determined upon, he introduces at night an elastic bougie seven or eight inches into the womb, and tucks away the outside portion in the vaginæ. Next day, finding the cervical canal somewhat open, and evidences of commencing uterine action. he proceeds to the second or *accelerative* stage, punctures the membranes, and leaves the rest to Nature; but in those cases where complications arise demanding immediate action, dilates with his caoutchouc bags, and, if necessary, turns so as to complete the delivery soon as practicable.

Placenta prævia comes next into notice, and forms the most important chapter of the book. In this he explains his physiological doctrines of development and implantation; the philosophy of hæmorrhage; and controverts the old fashioned ideas of treatment, showing their weakness and fallacy; for instance, the method prescribed of passing the hand and detaching the placenta *in totó*, he demonstrates its utter impracticability, since the placenta in the greater number of cases extends higher than the meridian of the uterus, very often reaching as high as the fundus, the fingers not being long enough to extend half way to its farther margin, and the cervix being generally too rigid and undilatable to permit the passage of hand in cavity of womb.

A priori, it is assumed that total detachment stops bleeding; this is partly true, and partly fallacious; for if the placenta is thrown off *spontaneously* hæmorrhage ceases, but it does not justify the belief of arrestation upon *artificial* separation. There exists a fundamental physiological distinction between the two cases. In the first instance *spontaneous* detachment is due to the contractile power of the uterus, the hæmorrhage being arrested by the same agency; whereas, if pulled off *artificially*, there being defective uterine contraction, bleeding continues. The chief points in placental attachment are illustrated by a diagram, dividing the internal uterine surface into three zones, fundal, meridional, and cervical; the first, the seat of *safe* attachment; the second, *comparatively safe*, but may lead to obliquity of womb, oblique position of the child, lingering labor, and thus dispose to

retention of placenta, and *post partum* hæmorrhage; the cervical, the place of *dangerous* attachment, and all implantations here, whether it be the encroachment of a small portion, or whether the entire mass, is liable to previous dislodgment. This lower polar circle is therefore the physiological line of division between prævial and lateral placentæ, *below* which you have spontaneous detachment and hæmorrhage, *above* which, neither. Having entered these points, the treatment is evident; puncture the membranes to allow the uterus to exert a proper pressure; effect dilatation with the "hydrostatic bags," if it becomes necessary; and should hæmorrhage still continue, then introduce one or two fingers and detach that portion of placenta within the orificial zone; still further hasten by the oxytocics, or resort to version. The hæmorrhage resulting from placenta prævia is called by Rigby the "unavoidable," to distinguish it from his "accidental," occasioned by detached placenta during gestation. The differentiation of the accidental is not always an easy matter, being determined by subjective symptoms generally; but, if occurring, whatever the cause, it calls for immediate delivery, by the methods above enumerated, at the same time keeping up your patient by warm cordials, food, etc., etc.

As to the *post partum* hæmorrhages, whether from retained placenta due to unequal uterine contraction, or to adhesion from diseased conditions, or to accumulation of clots, etc., etc., we have little to say, except to notice one simple and invariable rule; that is, to control them, the *uterus must be fully emptied of its contents*, not only by every means possible to induce contraction, but by the introduction of the hand, and even by the use of the wire ecraseur should retained portions, or cotyledons, be the causation, and if then bleeding should persist, the injection, repeated if necessary, of the per-chloride of iron—1 to 3 of water. Such complications as fibrous tumors, polypi, inversion, etc., are to be managed upon general principles, though in regard to the reduction of inversions by pressure and manipulation, he says, in passing back the womb, remember the pelvic axes, and when you reach the sacral promontory, pass the organ to *one side*. The operation of Dr. T. G. Thoms is here introduced by the American editor, as being novel, and the only means we may possess, when all others have failed. *Prima facie* it seems a formidable

one, yet, if the patient is prepared by the exhibition of opiates several days before, as recommended by the celebrated Dr. Todd, in all operations involving the peritoneum, there exist very strong reasons to predict a safe recovery. He cuts a few inches along the medion line above the symphisis pubis, into abdominal cavity, finds the inverted neck, introduces a steel instrument like a glove stretcher, dilates, and by the taxis returns the womb to its normal position.

Transfusion is spoken of very cleverly, and he looks upon it, *in futuro*, as a powerful agency in the hands of professional men to restore life, where excessive bleedings have taken place, etc. Without commenting upon the various methods and fluids to be employed, we may state that this operation will prove more uniformly successful where defibrination is practiced, and this process has been very ably demonstrated by Prof. Freer, of this city, not many months back.

The appendix treats of the difficulties of twin labors—head-locking and hæmorrhage—dorsal displacement of arm (as a rule due to the *nimia diligentia* in midwifery—an ugly complication, and, if not reduced, requiring operative interference); and the birth of monsters. There are no points to be particularly dwelt upon in this chapter, but what may be gleaned from any of the standard works, and in closing this analysis, we feel justified in giving this excellent treatise our most positive endorsement. A book that should be in the hands of every practitioner; clear and succinct in its statements; logical in its deductions; of pure diction, and thoroughly intelligible in its descriptions; filled with valuable facts coming from a man highly cultivated, of remarkable diagnostic powers; excellent judgment; and so humane and conservative that he should merit the thanks and gratitude of every member of our profession.

The American editor, with a modesty characteristic of true worth, has kept himself in the background, making few additions, and those from the best sources, and always *à propos* of the subject, and hence sparing us—for which he cannot be too highly commended—the insertion of prosy and lengthened extracts, generally so tedious and worthless, and only serving to interrupt the harmony of the original text.

"Volta Reeke."

Editor's Book Table.

[Note.—All works reviewed in the columns of the Chicago Medical Journal may be found in the extensive stock of W. B. Keen & Cooke, whose catalogue of Medical Books will be sent to any address upon request.]

Renal Diseases: A Clinical Guide to their Diagnosis and Treatment. By W. R. Basham, M.D., Fellow of the Royal College of Physicians; Senior Physician to the Westminster Hospital, and Lecturer on Medicine, etc., etc. With Illustrations. Philadelphia: Henry C. Lea, 1870. Pp. 304.

This is an unpretending volume, but one which we take pleasure in recommending to our readers as a clear and practical essay—one which will materially facilitate the acquisition of practical clinical ability, both with regard to diagnosis and treatment. It is divided into three parts; the first of which is devoted to the various forms of Nephritis, their symptoms, diagnosis and treatment; the second discusses "Chronic Nephritis — Chronic Albuminuvia," or those diseases without primary symptoms of inflammation; the third reviews, with illustrations, the Clinical Significance of the Urine.

The ten pages on Tubercular Nephritis and Pyelitis are, alone, worth more than the price of the entire volume. It is the most satisfactory exposition of the subject in a short space, that we have had the fortune to meet.

Gray's Anatomy,—

The new edition of which was announced in the June number, needs no introduction to our readers. It is pre-eminently *the* text book. This edition comprises much valuable new matter upon the topics: general anatomy, the development of the ovum and fœtal structures, and a compendious introduction to the study of microscopic anatomy. We scarcely see how the book can be further improved for the student. All else wanting can be furnished only by the scalpel and cadaver.

United States Sanitary Commission Memoirs—Surgical—receipt acknowledged last number, is a volume uniform with the Medical Memoirs previously issued. Octavo, pp. 586, and ten chromo lithograph plates. $6.50.

The first memoir treats: "On the Wounds of Bloodvessels, Traumatic Hemorrhage, Traumatic Aneurism, and Traumatic Gangrene." The second: "On the Secondary Traumatic Lesions of Bone, namely: Osteo-Myelitis, Periostitis, Ostitis, Osteo-Porosis, Caries, and Necrosis." The third: "Pyæmia."

The memoirs are by John A. Lidell, A.M., M.D., etc., etc. Edited by Prof. Frank Hastings Hamilton.

A large amount of valuable material has been utilized to an extent which we had reason to anticipate from the high reputation both of the author and editor.

Pamphlets.

The Remedies we Use. An Impartial View of the Present State of the Materia Medica, with Suggestions for its Improvement. [Anonymous.] Nashville, Tenn.: Gamble & Son, No. 46 Union Street.

Notes on the Physiology and Pathology of the Nervous System, with Reference to Clinical Medicine. A. Disseminated Sclerosis of the Brain and Spinal Cord. B. Annular or Cervical Sclerosis of the Spinal Cord. By Meredith Clymer, M.D., etc. New York: D. Appleton & Co.

Transactions of the Wisconsin State Medical Society, for the year 1869. Vol. III.

Editorial.

Fees for Life Insurance Examinations.

The American Medical Association, at its late meeting passed a resolution fixing Five Dollars as the fee for each examination for life insurance. It would be a pleasant state of affairs if this could become also a fixed fact. But so long as otherwise respectable physicians, who would not venture to crowd out brother practitioners from the care of patients, think themselves wholly justifiable in attempting to displace them as life insurance examiners, we think Companies will not be rapid in advancing the fees.

The scramble for positions of this sort is as funny as a Canada scrub race, and would awaken inextinguishable ridicule and laughter were it generally known.

Prices are nowhere "fixed" by resolution, but solely in accordance with the great laws of supply and demand.

Medical Experts.

A city paper, in view of this topic advances a few sensible ideas, which we hope will awaken interest in this most important matter, among the people. Any physician who has ever been on the witness stand as an expert must realize their essential truth. In the "hypothetical case" put to the witness, the lawyer, of course, always "supposes" the facts proved as he wishes them to be proved. Meanwhile the expert may positively know that the testimony in no degree warrants any such hypothesis.

We fervently trust that this is the true explanation of certain testimony (otherwise atrocious and disgraceful to the profession to the last degree) in the McFarland case in New York.

Our secular contemporary says:

"Several recent trials have exhibited the folly of the present system of examining experts in court, and especially physicians, in regard to the sanity of the prisoner, witness, testator, or other interested party. Under the present practice, a doctor is called by the prosecution and another by the defense, or, more frequently, several of these learned gentlemen by each party to the proceeding. The witness is examined, not by the court or the jury, but by the attorneys, and not on the evidence already adduced, but on the

fruitful suppositions furnished by the lawyers. The physician who testifies in the case may not have heard a particle of the evidence before the court, but, if a prosecution witness, is asked: "If such and such be the case, is not this man insane!" Of course, he must answer in the affirmative. If he is called by the defense, on the other hand the form of the question is: "If so and so be true, can this man possibly be insane?" Of course, he replies in the negative.

The result of this mode of procedure may be, and indeed usually is, to array a formidable host of learned men, who go to work apparently to contradict each other in the most scandalously absurd manner. The poor juror, with the best intentions in the world, but with a not particularly acute penetration, and befogged more than usual by the shrewd manœuvering of the lawyers, says, with the rest of mankind, "When doctors disagree, who shall decide?" and then gives his verdict according to his latest impressions or to his private estimate of the relative reliability or honesty of the medical witnesses. The doctors, too, whose intentions may be quite as good, go out of court at least in a very ridiculous position, and often under the aspersion of perjury, or dishonesty, or incapacity.

"The practice of the courts should be changed in this matter. If the question be purely professional, and the result turn entirely upon the confirmed sanity or insanity of an individual, as is often the case, then the trial should be before a jury of experts, when consultation would not be simply a trial of obstinacy, but a comparison of scientific research that would be likely to lead to truth. If other interests enter into the trial, and it is not considered desirable to have a jury composed of one class of men, with similar habits and thoughts, then the testimony of experts should be taken after all the other evidence is in, and under the charge of the court. Under this practice, there would be less of the apparent confliction of testimony, confusion of juries, injustice in verdicts, and scandal among the doctors."

Magnetic Springs.

Prof. Robert C. Kedzie, M.D., of Lansing, Mich., is inclined to attribute the magnetic peculiarities of the much vaunted St. Louis and other mineral springs, of that State, to the iron tubing of the artesian wells through which the water flows. Various speculations are afloat on the subject, and meanwhile the springs are haunted by multitudes of the lame, halt, and blind, and cures are as abundant as whilom in this city from the commands of "Prof. Newton." His "Disease, depart!" only equaled in efficacy the waters with "Magnetism blown into the bottles" of the Michigan pools of Bethesda. *Populus vult decipi, et decipiatur.*

Loot.

Intestinal Puncture in Tympanitis.

Under the advice of Dr. Fonssagrives, intestinal puncture, as a last resource, has been several times practiced at Toulouse, on two patients suffering with tympanitis. In the first case, the abdomen formed an immense mass, the patient was perfectly cyanosed and suffocating. An exploring trocar was inserted into the most distended part of the lower umbilical region. The gas escaped so violently as to extinguish a candle. The distention returning the next day, two fresh punctures were made in different places, and gave so much relief that the life of the patient was prolonged four days. In another case six punctures were successfully made until the gases were naturally evacuated and the patient cured.—*L'Un Med.—West. Jour. of Med.*

M. Auzias Turenne on Rabies.

This ingenious investigator endeavors to establish, (in a paper read before the Academy of Medicine of Paris,) a parallel between the phenomena of rabies and those of syphilis. It will be remembered that Marochetti considered that the virus, after having been absorbed by the wound, enters the circulation, and then gathers under the tongue. From the third to the ninth day small vesicles appear on either side of the frenum linguæ; they contain the virus, and are called lyssæ. Marochetti believed that by cauterizing these vesicles the further progress of the disease would be prevented. Experience has not confirmed his views; but M. Turenne, starting from these phenomena, has attempted to liken rabies to syphilis, and lyssæ to the infecting chancre.—*Dominion Med. and Surg. Journal.*

New Remedies for Burns.

Two new remedies for burns are added to the long list. The first is charcoal. A piece of vegetable charcoal laid on a burn at once soothes the pain, says the *Gazette Medicale*, and if kept applied for an hour cures it completely. The second one is sulphate of iron. This was tried by M. Joel, in the Children's Hospital, Lausanne. In this case, a child, four years of age, had been extensively burnt, suppuration was abundant and so offensive that the ward was uninhabitable. M. Joel ordered the child a tepid bath, containing a couple of pinches of sulphate of iron. This gave immediate relief to the pain, and being repeated twice a day—

twenty minutes each bath—the suppuration decreased, lost its odor, and the child was soon convalescent.—*Med. Press and Circular, April* 6, 1870.—*Med. News.*

Three parts of any simple oil, linseed, whale, or olive, with one part of Tilden's Solution of Carbolic Acid, has afforded us most excellent results in severe burns, from kerosene explosions. But the simplest plan, because the materials are everywhere easily obtained, is to melt together one part of beeswax and two parts of fresh lard, dip cloths in this and apply accurately to the surface. These will thoroughly exclude the air, can easily be renewed, and, in short, accomplish all that can be expected from external appliances. This last application relieved a friend of ours from a most frightful powder burn of the face with scarcely a mark left behind except from some particles of powder.

Chloral and Chloroform.

Communications on chloral multiply daily. Among some of its curious effects may be noticed an observation of M. Liégeois at the Sociète de Chirurgie that in a case in which he had performed a minor operation under the influence of chloral, which produced sleep, but not anæsthesia, he resorted to chloroform. To his great surprise he found that the association, so far from increasing the effects, gave rise to excitement which lasted as long as the inhalations were continued. The fact is the more to be remarked as tending to disprove the identity of action between chloral and chloroform insisted upon by Liebreich. M. Giraldés, proceeding in a different direction, administered to infants who have been chloroformed and remained very agitated, a chloral draught. The effect of the association was to produce peaceful sleep for from five to eleven hours. Since then he has frequently employed chloral, either in mixture or enema, whenever children have remained excited after chloroform, and always with success. M. Demarquay observed that he has continued, with advantage, his practice of giving patients immediately after operation successive doses of two or three to five grammes of chloral until sleep is produced. All subjects are, however, far from exhibiting the same effects from the action of chloral. In some, when it is given immediately after the operation, it produces a quiet sleep and deep calm which lasts all day, and prevents any of the pain consequent on the traumatism being felt. Others proved refractory to the action of chloral, which is sometimes rejected by vomiting. As a medium dose he gives two grammes in two spoonsful of syrup diluted with water. M. Giraud-Teulon has observed the same excitement pro-

duced by administering chloral in children that have been etherized as related by M. Liégeois in those who have been chloroformed. —*Ibid.*

Management of Pertussis.

In Newark, N. J., most of the physicians send their patients to the purifying room of the gas works, to spend an hour or two daily, the inhalation of the fumes arising from the gas passing through lime having the effect of moderating and shortening the disease. In cases where it is inconvenient to visit the works, carbonate of lime has been produced therefrom, and placed in vessels about the room in quantities sufficient to impregnate the atmosphere, and has been attended with good results. When access to gas works cannot be had, the hydro phenil, which, when unpurified, is called benzine, is recommended by Braithwaite; and the same results obtained as from a residence in the purifying chambers of the gas works. Ten or fifteen drops are given in a little water to a child every day, and as soon as it is asleep a few drops are sprinkled on the pillow, so that the smell is diffused throughout the room.—*Trans. of Med. Soc. of New Jersey.*

Cancrum Oris.

Abstract of a paper read at a meeting of the Liverpool Medical Association by Thomas R. Glynn, M.B., Lond. (*Liverpool Medical and Surgical Reports and Half-Yearly Abstract*).

The author confined the term to those cases in which gangrene of the lips or cheeks is a prominent feature. He did not think it was of the nature of a specific disease; because,—1st. It never attacks children as a distinct disease preceded by characteristic symptoms, though some have affirmed that it does. 2d. It is always the consequence of some severe illness, especially of the eruptive fevers, and, of these, measles most frequently precedes it. 3d. It is not infectious, though sometimes epidemic, but only as a consequence of the exanthemata. It very rarely attacks several children in a family simultaneously. It appears to depend upon great deterioration of the blood, springing from a general adynamic state, which may originate from many and various depressing causes. It is much more rarely met with among adults than among children, though not unknown among the former. The facts that the mucous membrane of the mouth is more liable to disease in children, and that measles occur chiefly among them, account partly for their great liability to cancrum oris. It has been known to occur at so early an age as nine days. It rarely attacks both cheeks, except as the result of mercurial salivation. Girls are most subject to it, and the majority of cases occur in large towns and manufacturing districts. It is emphatic-

ally a disease of the poor. Sometimes symptoms almost like scurvy are present, and the author expressed the opinion that it is not improbable some intimate relation may exist betwen scurvy and cancrum oris. He does not believe that mercury is the most common cause of the disease, as some think. He considered the gangrene to be the result of a low erysipelatous inflammation, commencing in the mucous membrane of the mouth. Gangrene of other parts may occur as complications; also pneumonia, which is very common; pleurisy, pericarditis, and other diseases of the mucous and serous membranes. The rate of mortality in cancrum oris has been excessively high. With regard to treatment, the author remarked that before applying escharotics, the general condition should be considered rather than the local. Nitric acid is useful at first, but its repeated application is injurious. Antiseptics are of great use. Tonics and stimulants constitute the proper internal treatment. The author gave the details of two cases, treated successfully by the use of chlorate of potash wash, and the internal administration of ammonia, chlorate of potash, and bark, with beef tea, wine, and brandy.—*Dental Cosmos.*

Almost Complete Ossification of the Human Body.

B.., a youth of 17, came under my notice, first, about four years ago with extensive ossification of the muscular system, which continued to progress till his death, which occurred a short time since. The early history of his case, as given by his family, is as follows:

He was a healthy, stout child at the age of eight months, at which time his parents moved to Texas by land. During their continuance on the road and camping out, they first discovered tumors about, in different parts of his body, the size of small marbles, and very hard. These tumors gave, apparently, but little pain, and in no way affected the general health. After an interval of twelve or eighteen months the tumors began to disappear by absorption, and about the same time stiffness of the joints was manifested. Gradual anchylosis followed, and at the age of ten years the hip-joints with those of the arms were completely anchylosed. The ossific matter began then to be deposited in the muscular system. The chest became enclosed with a complete sheet of bone, leaving no traces of outline of the ribs. The head was immovably fixed by the ossification of the sterno-cleido mastoideus on each side. The muscles of mastication were as yet unaffected, and his ability to chew his food not impaired. His digestion was good, and his mental faculties more than ordinary. He could as yet use wrists and hands, his arms being stiffened at right angles, thus allowing him to whittle a little with a pen-knife. When placed upon his feet he could move slowly and cautiously over a smooth surface, but if he got a fall, was unable to rise unassisted.

Movement, however, as the anchylosis progressed, became more and more difficult and totally impossible at a later period. He did not increase in stature after his tenth year, and never manifested any signs of virility. The forms of the muscles were perfectly preserved and could be distinctly felt through the skin, which adhered closely to them. The deposition of ossific matter continued during his life, and, when he died he was almost complete bone. Up to the hour of his death his mind continued clear and unimpaired, and his digestion until a short time previous, and he was cheerful and apparently happy.—*W. M. Byers, M. D., New Orleans Journal of Medicine.*

Rip Van Winkle, M. D.

An After Dinner Prescription. Taken by the Massachusetts Medical Society, at their Meeting held May 25th, 1870.

[We are indebted to the *Boston Medical Journal*, for Prof. O. W. Holmes' Poem, which we reproduce because it contains philosophy as well as fun. Comment is unnecessary—"Good wine needs no bush."]

Canto First.

Old Rip Van Winkle had a grandson, Rip,
Of the paternal block a genuine chip;
A lazy, sleepy, curious kind of chap;
He, like his grandsire, took a mighty nap,
Whereof the story I propose to tell
In two brief cantos, if you listen well.

The times were hard when Rip to manhood grew;
They always will be when there's work to do;
He tried at farming—found it rather slow—
And then at teaching—what he didn't know;
Then took to hanging round the tavern bars,
To frequent toddies and long-nine cigars,
Till Dame Van Winkle, out of patience, vexed
With preaching homilies, having for their text
A mop, a broomstick—aught that might avail
To point a moral or adorn a tale,
Exclaimed—"I have it! Now then, Mr. V.!
He's good for *something*—make him an M. D."!

The die was cast; the youngster was content;
They packed his shirts and stockings, and he went.
How hard he studied it were vain to tell—
He drowsed through Wistar, nodded over Bell,
Slept sound with Cooper, snored aloud on Good;
Heard heaps of lectures—doubtless understood—
A constant listener, for he did not fail
To carve his name on every bench and rail.

Months grew to years; at last he counted three,
And Rip Van Winkle found himself M. D.

Illustrious title! in a gilded frame
He set the sheepskin with his Latin name,
RIPUM VAN WINKLUM, QUEM WE—SCIMUS—know
IDONEUM ESSE—to do so and so;
He hired an office; soon its walls displayed
His new diploma and his stock in trade,
A mighty arsenal to subdue disease
Of various names, whereof I mention these:
Lancets and bougies, great and little squirt,
Rhubarb and Senna, Snakeroot, Thoroughwort,
Ant. Tart., Vin. Colch., Pil. Cochiæ and Black Drop,
Tinctures of Opium, Gentian, Henbane, Hop,
Pulv. Ipecacuanhæ, which for lack
Of breath to utter men call Ipecac,
Camphor and Kino, Turpentine, Tolu,
Cubebs, "Copeevy," Vitriol—white and blue,
Fennel and Flaxseed, Slippery Elm and Squill,
And roots of Sassafras and "Sassaf'rill,"
Brandy—for colics—Pinkroot, death on worms—
Valerian, calmer of hysteric squirms,
Musk, Assafœtida, the resinous gum
Named from its odor—well, it does smell some—
Jalap, that works not wisely, but too well,
Ten pounds of bark and six of Calomel.

For outward griefs he had an ample store,
Some twenty jars and gallipots, or more:
Ceratum simplex—housewives oft compile
The same at home, and call it "wax and ile";
Unguentum Resinosum—change its name,
The "drawing salve" of many an ancient dame;
Argenti Nitras, also Spanish flies,
Whose virtue makes the water-bladders rise—
(Some say that spread upon a toper's skin
They draw no water, only rum or gin)—
Leeches, sweet vermin! don't they charm the sick?
And Sticking-plaster—how it hates to stick!
Emplastrum Ferri—ditto *Picis*, Pitch;
Washes and Powders, Brimstone for the——which,
Scabies or *Psora*, is thy chosen name
Since Hahnemann's goosequill scratch'd thee into fame,
Proved thee the source of every nameless ill,
Whose sole specific is a moonshine pill,
Till saucy science, with a quit grin,
Held up the Acarus, crawling on a pin?
—Mountains have labored and have brought forth mice:
The Dutchman's theory hatched a brood of—twice
I've well nigh said them—words unfitting quite
For these fair precincts and for ears polite.

The surest foot may chance at last to slip,
And so at length it proved with Doctor Rip.
One full-sized bottle stood upon the shelf
Which held the medicine that he took himself:
Whate'er the reason, it must be confessed
He filled that bottle oftener than the rest;
What drug it held I don't presume to know—
The gilded label said "Elixir Pro."

One day the Doctor found the bottle full,
And, being thirsty, took a vigorous pull,
Put back the "Elixir" where 'twas always found,
And had old Dobbin saddled and brought round.
—You know those old-time rhubarb-colored nags
That carried Doctors and their saddle-bags;
Sagacious beasts! they stopped at every place
Where blinds were shut—knew every patient's case—
Looked up and thought—the baby's in a fit—
That won't last long—he'll soon be through with it;
But shook their heads before the knockered door
Where some old lady told the story o'er
Whose endless stream of tribulation flows
For gastric griefs and peristaltic woes.

What jack o' lantern led him from his way,
And where it led him, it were hard to say;
Enough that wandering many a weary mile
Through paths the mountain sheep trod single file,
O'ercome by feelings such as patients know
Who dose too freely with "Elixir Pro.,"
He tumbl—dismounted, slightly in a heap,
And lay, promiscuous, lapped in balmy sleep.

Night followed night, and day succeeded day,
But snoring still the slumbering Doctor lay.
Poor Dobbin, starving, thought upon his stall,
And straggled homeward, saddle-bags and all;
The village people hunted all around,
But Rip was missing—never could be found.
"Drownded," they guessed;—for more than half a year
The pouts and eels *did* taste uncommon queer;
Some said of apple-brandy—other some
Found a strong flavor of New England rum.

—Why can't a fellow hear the fine things said
About a fellow when a fellow's dead?
The best of doctors—so the press declared—
A public blessing while his life was spared,
True to his country, bounteous to the poor,
In all things temperate, sober, just and pure;
The best of husbands! echoed Mrs. Van,
And set her cap to catch another man.

—So ends this Canto—if it's *quantum suff.*,
We'll just stop here and say we've had enough,
And leave poor Rip to sleep for thirty years;
I grind the organ—if you lend your ears
To hear my second Canto, after that
We'll send around the monkey with the hat.

Canto Second.

So thirty years had passed—but not a word
In all that time of Rip was ever heard;
The world wagged on—it never does go back—
The widow Van was now the widow Mac—

France was an Empire—Andrew J. was dead,
And Abraham L. was reigning in his stead.
Four murderous years had passed in savage strife,
Yet still the rebel held his bloody knife.
—At last one morning—who forgets the day
When the black cloud of war dissolved away?
The joyous tidings spread o'er land and sea,
Rebellion done for! Grant has captured Lee!
Up every flagstaff sprang the Stars and Stripes—
Out rushed the Extras wild with mammoth types—
Down went the laborer's hod, the schoolboy's book—
"Hooraw!" he cried—"the rebel army's took!"
Ah! what a time! the folks all mad with joy:
Each fond, pale mother thinking of her boy;
Old gray-haired fathers meeting—Have-you-heard?
And then a choke—and not another word:
Sisters all smiling—maidens, not less dear,
In trembling poise between a smile and tear;
Poor Bridget thinking how she'll stuff the plums
In that big cake for Johnny when he comes;
Cripples afoot—rheumatics on the jump,
Old girls so loving they could hug the pump,
Guns going bang! from every fort and ship—
They banged so loud at last they wakened Rip.

I spare the picture, how a man appears
Who's been asleep a score or two of years;
You all have seen it to perfection done
By Joe Van Wink—I mean Rip Jefferson.
Well, so it was—old Rip at last came back,
Claimed his old wife—the present widow Mac—
Had his old sign regilded, and began
To practice physic on the same old plan.

Some weeks went by—it was not long to wait—
And "please to call" grew frequent on the slate.
He had, in fact, an ancient, mildewed air,
A long grey beard, a plenteous lack of hair—
The musty look that always recommends
Your good old Doctor to his ailing friends.
—Talk of your science! after all is said
There's nothing like a bare and shiny head—
Age lends the graces that are sure to please,
Folks want their Doctors mouldy, like their cheese.

So Rip began to look at people's tongues
And thump their briskets (called it "sound their lungs"),
Brushed up his knowledge smartly as he could,
Read in old Cullen and in Doctor Good.
The town was healthy; for a month or two
He gave the sexton little work to do.

About the time when dogday heats begin,
Measles and mumps and mulligrubs set in;
With autumn evenings dysentery came,
And dusky typhoid lit his smouldering flame;
The blacksmith ailed—the carpenter was down,
And half the children sickened in the town.

The sexton's face grew shorter than before—
The sexton's wife a brand-new bonnet wore—
Things looked quite serious—Death had got a grip
On old and young, in spite of Doctor Rip.

And now the Squire was taken with a chill—
Wife gave "hot drops"—at night an Indian pill;
Next morning, feverish—bedtime, getting worse,
Out of his head—began to rave and curse;
The Doctor sent for—double quick he came:
Ant. Tart. gran. duo, and repeat the same
If no et cetera. Third day—nothing new;
Percussed his thorax—set him cussing, too—
Lung-fever threatening—something of the sort—
Out with the lancet—let him blood—a quart—
Ten leeches next—then blisters to his side;
Ten grains of calomel——just then he died.

The Deacon next required the Doctor's care—
Took cold by sitting in a draught of air—
Pains in the back, but what the matter is
Not quite so clear—wife calls it "rheumatiz."
Rubs back with flannel—gives him something hot—
"Ah!" says the Deacon, "that goes *nigh* the spot."
Next day a *rigor*—run, my little man,
And say the Deacon sends for Doctor Van.
The Doctor came—percussion as before,
Thumping and banging till his ribs were sore—
"Right side the flattest"—then more vigorous raps—
Fever—that's certain—pleurisy, perhaps.
A quart of blood, will ease the pain, no doubt,
Ten leeches next will help to suck it out,
Then clap a blister on the painful part—
But first two grains of *Antimonium Tart.*
Last, with a dose of cleansing calomel
Unload the portal system——that sounds well!

But when the self-same remedies were tried,
As all the village knew, the Squire had died;
The neighbors hinted—"this will never do,
He's killed the Squire—he'll kill the Deacon too."

—Now when a doctor's patients are perplexed,
A *consultation* comes in order next—
You know what that is? In a certain place
Meet certain doctors to discuss a case
And other matters, such as weather, crops,
Potatoes, pumpkins, lager beer and hops.
For what's the use?—there's little to be said,
Nine times in ten your man's as good as dead—
At best a talk (the secret to disclose)
Where three men guess and *sometimes* one man knows.

The counsel summoned came without delay—
Young Doctor Green and shrewd old Doctor Gray—
They heard the story—"Bleed!" says Doctor Green,
"That's downright murder! cut his throat, you mean!

Leeches! the reptiles! Why, for pity's sake,
Not try an adder or a rattlesnake!
Blisters! Why bless you, they're against the law—
It's rank assault and battery if they draw!
Tartrate of Antimony! shade of Luke,
Stomachs turn pale at thought of such rebuke!
The portal system! What's the man about?
Unload your nonsense! Calomel's played out!
You've been asleep—you'd better sleep away
Till some one calls you"——
"Stop!" says Doctor Gray—
"The story is you slept for thirty years;
With brother Green, I own that it appears
You must have slumbered most amazing sound;
But sleep once more till thirty years come round,
You'll find the lancet in its honored place,
Leeches and blisters rescued from disgrace,
Your drugs redeemed from fashion's passing scorn,
And counted safe to give to babes unborn."

Poor sleepy Rip, M.M.S.S., M.D.,
A puzzled, serious, saddened man was he;
Home from the Deacon's house he plodded slow
And filled one bumper of "Elixir Pro."
"Good bye," he faltered, "Mrs. Van, my dear!
I'm going to sleep, but wake me once a year;
I don't like bleaching in the frost and dew,
I'll take the barn, if all the same to you.
Just once a year—Remember! no mistake!
Cry 'Rip Van Winkle! time for you to wake!'
Watch for the week in May when laylocks blow,
For then the Doctors meet, and I must go."

Just once a year the Doctor's worthy dame
Goes to the barn and shouts her husband's name,
"Come, Rip Van Winkle!" (giving him a shake)
"Rip! Rip Van Winkle! time for you to wake!
Laylocks in blossom! 'tis the month of May—
The Doctors' meeting is this blessed day,
And come what will, you know I heard you swear
You'd never miss it, but be always there!"

And so it is, as every year comes round
Old Rip Van Winkle here is always found.
You'll quickly know him by his mildewed air,
The hayseed sprinkled through his scanty hair,
The lichens growing on his rusty suit—
I've seen a toadstool sprouting on his boot—
—Who says I lie? Does any man presume—
Toadstool? No matter—call it a mushroom.
Where is his seat? He moves it every year;
But look, you'll find him—he is always here—
Perhaps you'll track him by a whiff you know—
A certain flavor of "Elixir Pro."

Now, then, I give you—as you seem to think
We can drink healths without a drop to drink—
Health to the mighty sleeper—long live he!
Our brother Rip, M.M.S.S., M.D.!

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ARTICLE I.—*A Glance at the Rise and Progress of Cell Theories.* By I. N. DANFORTH, M.D., Chicago.

From an early period in the history of medicine, Physiologists and Anatomists seem to have realized that there *must* be some ultimate atom; some anatomical unit, from which the parts and organs of the body are derived, and by which they are maintained. But, although we are in possession of pretty reliable evidence that the magnifying properties of lenses were known to the ancients, we have no reason to believe that they were ever used for purposes of scientific investigation. Indeed, the specimens found in course of the excavations at Herculaneum and Pompeii are so rude and coarse as to be utterly useless except as mere toys. It is not therefore surprising that their knowledge of ultimate structure was next to nothing. Fallopius, about the year 1523, described elementary structure as consisting of bone, cartilage, fat, flesh, nerve, ligament, tendon, membrane, vein, artery, nails, hair, and skin—which, at the very best, was but a very faulty and incorrect classification of the tissues as they appear to the naked eye.

Although the compound microscope was invented about the year 1590 by the Jansens of Holland, (the Italians also claim priority) nearly a century elapsed before it was used to any extent in the examination of the animal tissues. Borellus, of Pisa, about 1656, seems to have been a "microscopist" of some note; but, like quite too many modern observers, he was afflicted with a "theory," and his observations were terribly distorted in support thereof. According to him, diseases were caused by animalculæ in the blood and tissues; consequently *his* peculiar mission was to *find* animalculæ—and of course he succeeded. He describes pus corpuscles as animalcules—and says that he has actually *seen* them depositing their ova! Did he not see the process of cell development by budding, and misapprehend its import?

On the authority of Boerhaave, Swammerdam discovered the blood globule in 1658. Towards the close of the seventeenth century, considerable progress seems to have been made in microscopic investigation, and a somewhat correct appreciation of the importance of this instrument seems to have been developed. Malpighi, in 1661–5, published accounts of the minute structure of the lungs, kidneys, spleen and liver; Hooke, in 1667, described the *cellular* structure of plants, and, in 1670, Malpighi made still further contributions in the same direction. The latter observer also conferred upon the cell the name of "utricle," thus taking the first step in establishing the confused nomenclature with which the subject of cytology is harassed and burdened to-day. But, to atone for that, Malpighi taught the very important doctrine that the cell or "utricle" is the seat of inherent vitality; that it is, of itself, an independent entity. Leeuwenhœck, in 1687, demonstrated the capillaries, and discovered the spermatozoa, ascribing to them their correct and proper function.

But no attempt seems to have been made at a systematic construction of the tissues of the body from a constant and ultimate element, until Haller, about 1757, promulgated his "fibre" theory. According to him, the tissues consist of two elements, namely, "fibre" and "organized concrete," whereof the former is the most important in that it is the seat of "irritability"—"the cause for all the phenomena of life"—and, consequently, the ultimate or primary agent of the phenomena of life. "Organized concrete," on the other hand, is a "mere glue" (Tyson) or connective

substance—and its functions are accordingly altogether physical. But this theory could not have been founded upon microscopic investigation, since he says that the fibre is invisible—distinguishable only by the "mind's eye." It is interesting, however, as an evidence of his belief in a *structural element*, uniform in appearance, and constantly present, which was the true seat of vital manifestations.

The theory of Wolf seems to have been a step backward rather than forward. He taught that the cell is a mere cavity, produced by the development ("differentiation") of the nutritive fluid, and not an independent entity; that this organization proceeded under the guiding influence of the *vis essentialis* or organizing power, resident in the nutritive fluid, thus transferring the seat of vitality from the cell to its pabulum or "blastema"—than which a greater error could hardly have been committed.

After the downfall of the "fibre theory," the globule asserted *its* claims to notoriety—and this was certainly a step in the advance, since it led *towards* truth, whereas the "fibre theory" led precisely in the opposite direction. From 1779 to 1839 the globule maintained its importance as an ultimate element. But it derived its chief importance from the labors of Milne-Edwards, whose work, published in 1823, was largely devoted to the elaboration of the "globular theory"—according to which the principal tissues of the body were constructed from globules, measuring from $\frac{1}{8000}$ to $\frac{1}{7500}$ of an inch in diameter. Meantime, we must not overlook two facts; first, that great confusion had arisen in the terms employed by different writers—the words *granule*, *globule* and *molecule* being interchangeably and carelessly used, without a really definite meaning being attached to either; and, secondly, that the instruments employed were necessarily imperfect and coarse, and almost totally wanting in many of the accessories at this day deemed indispensable for the successful prosecution of minute investigations. Hence, it is more than probable that the true cell was actually seen long before its announcement by Schleiden, although its importance was totally unappreciated.

But the history of cytology, as a systematic branch of study, really commences with the observations of Schleiden and Schwann in the year 1838—so long was it from the invention of the compound microscope, to its practical utilization in the broad field of

physiological inquiry. The observations of Schleiden were chiefly confined to vegetable structure; he conceived and announced the theory that the cell is the structural unit, and that all plants are developed after a uniform method by means of cell multiplication. This theory "Schwann immediately extended to animal tissues," (Tyson), and the goal was reached! The importance of this announcement, in its bearings on physiology and pathology, can scarcely be overestimated; it was hardly, if at all, less momentous than the discovery of the circulation of the blood by Harvey. But, while Schleiden and Schwann took a long stride in the advance, they also fastened upon us a most egregious error, which the weight of their great authority served to perpetuate for years —namely, "free cell development," which is only another name for spontaneous generation. So late as 1857, that excellent scholar and writer, Peaslee, of New York (Histology, page 120), states that cells are developed "directly from the plasma, without the aid of a pre-existing cell." Intending to allude to this subject more at length in a subsequent paper, I content myself for the present by saying that I believe this doctrine to be utterly erroneous and dangerous. The nucleus, discovered by Brown, of Edinburgh, in 1833, was named, by Schleiden, the "cytoblast," or cell bud, and the hyaline fluid was by the same observer called the "blastema," or formative element of the tissues, which was but adding another rivet to the chain which binds us to the dead body of spontaneous generation. The word "blastema," however, is not to blame for this; it was *forced* into this unwilling service by Schleiden, having been frequently used by Hippocrates in a far different and more appropriate connection. It is somewhat uncertain whether the nucleolus was first discovered by Schleiden or Valentin; it is more than probable, however, that the merit of this discovery belongs to the former, although the term "nucleolus" was first applied by Schwann.

The discoveries of Henle (1841), who in general adopted the views of Schwann regarding primary cell development, chiefly relate to cell multiplication, and, on this subject, his statements have stood the test of time. He taught that cells multiply in three ways, namely: by segmentation, by endogenous cell development, and by "budding." The discovery of the last named

mode of development was a most important addition to our knowledge, though destined to lie dormant for many subsequent years.

The observations of Martin Barry (1840) relate to the changes that occur in the ovum *post coitum;* he recognized the fact that the ovum is practically a cell, and carefully studied and accurately described the changes which take place therein during development. He also called attention to the "germinal vesicle," which he correctly regarded as the proper "nucleus," and the "germinal spot," which, with equal correctness, he regarded as the "nucleolus." But the chief merit of Barry seems to have been, that he traced the development of cells from pre-existing cells—or "parent centres"—thus striking the first vigorous blow at the then popular notion of "free cell development."

Prof. John Goodsir seems to have added but little to our knowledge regarding cell *structure;* but he clearly conceived and quite fully announced the theory concerning cell *action*, which of late years has been so vigorously enforced by Virchow. Briefly, this theory is as follows: first, the body is divided into innumerable islets or "centres" of nutrition; these nutritive centres consist essentially of groups of cells, and these cells are in some sort presided over by, and are tributary to one central or capital cell, the latter being the probable parent of the others. This, it will be observed, is scarcely more or less than Virchow's doctrine regarding "cell territories." Secondly, according to this writer, the nucleus is the true centre of nutrition; the active and essential part of the cell; and all nuclei or nutritive centres are derived from pre-existing nuclei, and are never originated by a so-called "blastema," or formative substance, by any power outside the nuclei, and in this he assuredly anticipated Virchow. I think it is undeniably true that, however much or little merit there may be in this theory, quite too much praise has been awarded Virchow, and quite too little to Goodsir therefor; but certainly Virchow himself has not failed to properly recognize and acknowledge Prof. Goodsir's labors.

In a future paper, I propose to examine the doctrines of Huxley, Virchow and Beale, somewhat at length, together with their bearings on the present status and tendency of "cell doctrines." In conclusion, I wish to acknowledge my indebtedness to the excel-

lent little work of Dr. Tyson, of Philadelphia, "The Cell Doctrine,"* for very much of the material incorporated in the present article.

ARTICLE II.—*Fibrous Tumor of the Bladder Successfully Removed.* By A. REEVES JACKSON, M.D., Chicago, Ill.

Mrs. K., a resident of Monroe county, Pennsylvania, aged 40 years; married; is the mother of four children, the youngest of whom is ten years old. She is of spare habit of body, and for a number of years has been afflicted with a large femoral hernia of the right side, for which mechanical support has been used. Her general health has usually been good.

I was called to see her December 9, 1869, and obtained the following history: During the past four or five weeks she had experienced a rather frequent desire to urinate, the passage of the water being attended with more or less pain. On several occasions the urine had been bloody. These attacks of irritability of the bladder although becoming latterly quite frequent, were not of long duration—rarely lasting more than ten or twelve hours—and had not been sufficiently severe to impel her to seek medical advice. Six days previously, (3d inst.) after one of those attacks she suddenly found herself quite unable to urinate. There was a constant painful effort to do so, accompanied with many ineffectual straining efforts. A practitioner residing in the immediate vicinity was called to see her, and a variety of powerful diuretics, purgatives, etc., were prescribed. The pain meanwhile became constant and increased in severity. In the course of two or three days the urine began to dribble away, and the patient being unable to sit up, the bedding soon became saturated. Believing that his remedies had been *too effectual* the doctor (*sic*) now commenced prescribing others, with the view of checking this profuse flow. Among these opium was given, and although it did not lessen the incontinence, it yet served a good purpose, by procuring partial relief from pain.

* For sale by W. B. Keen & Cooke, Chicago.

At the time of my visit she was still under the influence of an opiate given the previous evening. Her skin was cool and moist; tongue covered with a dry brownish coating; pulse 120, small, with a quick, sharp beat. The lower part of the abdomen was much distended, and yielded a dull sound on percussion. During the examination the patient became sufficiently aroused to recognize me, and begged that I would do something to relieve her. I introduced a catheter and drew off nearly six pints of stale, bloody, rather offensive urine, with very great relief. Suddenly the flow stopped. The enlargement of the hypogastrium although very much lessened was still distinctly perceptible, presenting the appearance of a rounded, well-defined tumor. Under the impression that some obstacle was impeding the further flow of urine, I withdrew the instrument a short distance, and this manœuvre not being successful, removed it entirely, in order to examine the openings. These being quite pervious, I was puzzled, and introduced it again. No urine appeared; and as I attempted to change the position of the instrument somewhat, I became conscious of the existence of an impediment to its usual freedom of motion. I could press it a short distance forward and toward the left side, but a strong resisting body effectually prevented the turning of the instrument, either backward or toward the right side. I passed a finger into the vagina, but could not by any manipulation succeed in feeling the catheter through its walls. A male instrument subsequently introduced gave similar results. While its point could be distinctly felt through the thin abdominal wall when pressed anteriorly, it could not be turned at all toward the right side, and very slightly toward the left; neither could its course be felt from the vagina.

This was at eight o'clock in the evening. The following morning I saw her again at an early hour and learned that she had passed a comparatively comfortable night, sleeping a considerable part of the time. There had been some dribbling of urine, and she was still unable to evacuate the bladder by any effort of her own.

Introducing a male catheter I removed a little more than a pint of bloody urine, having a strong ammoniacal odor. Again, as on the previous evening, the flow abruptly stopped; again I found

that no change either in the direction or position of the instrument was sufficient to restore it; and, again, the evacuation of the bladder did not remove the persistent globular hard tumor of the abdomen. In attempting to carry the instrument about in various directions—which was done in the most gentle manner, and without producing much pain—I found the same difficulty, or rather the same impossibility, as had been noticed the evening before. On the withdrawal of the instrument, I found that its openings were partially closed by clots of fresh blood.

As the patient's residence was about sixteen miles from my own, I left a catheter with the husband, an intelligent German, instructing him sufficiently in its use, and ordered its employment at intervals of eight hours, or oftener if it should seem necessary in order to relieve pain.

I did not see my patient again for six days, at the end of which time I was summoned by telegraph, to visit her as quickly as possible. On my arrival, about noon, the husband informed me that, very early in the morning, his wife had awakened with a more intensely painful desire to urinate than she had experienced at any time since my former visit, accompanied by strong involuntary bearing-down efforts. As she could not void a single drop of urine —had not done so, in fact, since I saw her—he proceeded to introduce the catheter as usual, when, to his great surprise, he found himself prevented by the pressure of a mass of something resembling, as he said, a piece of boiled beef, having a grayish-red color, filling up and slightly protruding from the urethral orifice. In great consternation, he at once started for the nearest telegraph station, one mile distant, to summon me. On his return he discovered that the substance had disappeared into the bladder again. He now introduced the catheter without difficulty, and drew off a quantity of bloody urine, which had been set aside to await my coming, and which I found, on examination, to contain a large quantity of mucus and some pus in addition to the blood.

Several hours having elapsed since the bladder had been emptied, I introduced a catheter, and distinctly felt, as I did so, what I had not experienced on any former occasion, namely, an evident obstruction to its ready ingress. The impediment seemed to yield to moderate pressure, however, and the urine flowed freely. This

latter had now a dark brown, muddy appearance, was highly offensive, and contained a large quantity of muco-pus. A small amount of fresh blood followed the withdrawal of the instrument.

With the view of making a more thorough exploration a sponge tent was introduced into the urethra and permitted to remain four hours. On removing it I was enabled to introduce the index finger sufficiently far to perceive the pressure of a tolerably dense mass with a smooth surface occupying the lower part of the bladder, and pressing against and somewhat into the vesical orifice of the urethra. A larger tent was now introduced, and as the presence of the first one had been productive of considerable pain, a full dose of Morph. Sulph. was administered at the same time. As it was impossible for me to remain with the patient, or, indeed, to see her again in less than twenty-four hours, I directed the husband to remove the tent at the end of four hours; and further, having provided him with polypus-forceps, a tenaculum, ligature-twine, etc., directed him to seize the protruding substance, should it again appear, and secure it against return until my arrival. On the following day he met me as I was approaching the house, and with a triumphant air showed me a small bottle in which was a reddish fleshy-looking mass about the thickness and nearly the length of a finger. It was tough, rather softer in some portions than others, and seemed to have been moulded to the shape of the urethra in its passage. It had made its appearance, he informed me, on the withdrawal of the tent, and he had seized it with the forceps and fingers, and making firm traction (here he had exceeded his instructions,) had caused the patient very great pain, and had broken the substance off in the urethra, where he was unable again to reach it. The urethra being now very greatly irritated and excessively painful, it was deemed advisable to suspend, for a time, operative procedures. Cloths wrung out of a hot infusion of opium and arnica flowers were applied to the genitals, and a full dose of Morphiæ given internally. She was also to have the catheter passed at regular intervals; the bowels were to be moved by enemata; and she was to have beef broth, porter etc., daily, at proper intervals.

Two days passed. All had been done according to directions. The catheter had been regularly used with variable success. Sometimes the husband was aware of the existence of an impedi-

ment to its introduction, and at others he was unable to discover anything of the kind.

The irritation of the urethra having been sufficiently lessened, I introduced as large a sponge tent as possible, and removed it at the expiration of three hours. The passage was then sufficiently dilated to permit the forefinger to enter readily into the bladder, and with its point the growth could be distinctly felt. A long narrow bladed forceps was passed in, and efforts made to grasp a portion of the tumor, with very indifferent success, however. I only succeeded in detaching small portions, and bringing them away between the blades. These attempts were attended with considerable hæmorrhage, and I finally desisted. In a short time, and while I was pondering upon the best course to adopt, the patient was seized with severe pain and vesical tenesmus, and made frantic efforts to urinate. I hastened to introduce the catheter, when I discovered a portion of the tumor showing itself at the orifice of the urethra. I at once grasped it with a pair of small placenta-forceps, and with a succession of swaying movements from side to side, drew it out about two inches. I then substituted my fingers for the instrument, and twisted the mass slowly, like a rope. The patient although suffering the most acute pain, aided its expulsion by powerful bearing-down efforts. I succeeded, in this manner, in removing a portion of the growth eight inches in length, of the thickness of the thumb. Then it gave way, and the remaining portion receded into the bladder. I was much disappointed at this termination, as I had hoped to remove the entire mass at this time. Very little bleeding attended the operation, although a few clots of blood—the result, probably, of the attempts made an hour before with the forceps—escaped by the side of the tumor, as it was being withdrawn.

During the succeeding four or five days many pieces of the now disintegrated tumor came away. They varied very greatly in size, some being quite small—mere shreds, in fact—while others were an inch or more in length. The larger pieces moulded themselves, in their passage, to the size and shape of the urethral canal. Toward the last they became exceedingly offensive, as did also the urine, which was loaded with pus, blood, and numerous shreds. The larger pieces were taken care of and placed in alcohol, at my

request. The smaller ones, and that part of the growth which was softened down and passed off with the urine, of course escaped. The amount preserved weighs eight and a half ounces, and forms a mass as large as the closed fist.

The general condition of the patient now rapidly improved, so that at the end of a fortnight she was able to walk about the house. Incontinence, however, had succeeded the retention, and this still remained. The urine, which was now quite normal in quality and amount, was passing away continually, much to the disgust and discomfort of the patient. The bladder had contracted adhesions with the surrounding viscera, and its walls, thickened and hardened by inflammatory deposits, could be distinctly felt, filling a space in the hypogastric region as large as that occupied by the gravid uterus at four months. It was thus prevented from being either a retaining or an expelling organ, and I had nothing better to suggest for the patient than the use of a urinal, which was procured for her, and which she wears with a good degree of comfort.

April 30th, I saw Mrs. K. again. She had then fully regained her general health. The incontinence was improving. In certain positions of the body she could retain the urine nearly an hour, and felt hopeful that she might get entirely well. The bladder appeared also to be regaining its power; for there were times when with one or two ounces of urine retained, she found herself able to expel it with a fair degree of force.

Submitted to microscopic examination, a section of the tumor presents the same fibrous and vascular appearances as are seen in the case of uterine fibroids; and, indeed, on comparing it with a specimen of the latter, the two, both in their general character and minute structure, appear to be identical.

There are some points of interest connected with the foregoing case that seem to justify a few remarks.

It is, in the first place, as far as I am able to ascertain, the first of the kind that is recorded as having occurred to an American surgeon. Fibrous tumors are confessedly among the rarest, and perhaps are indeed the very rarest, diseases of the bladder. Thompson, in his admirable monograph on the *Urinary Organs*, says, "Thus, first, we have simple fibrous growths, springing from the walls of the bladder and wholly unassociated with the prostate;

the rarest of all forms—in short, exceedingly rare, known to me personally only in museums." Gross, with his vast experience, mentions the fact that not a single case has occurred to him. This latter author states that "Zacatus Lusitanus found in the bladder of a man who died of retention of urine, a polype of the size of a goose's egg, the interior of which was occupied by a tough, glutinous substance. This was situated at the neck of the viscus, while another, a harder and more fleshy mass, existed in the body of the bladder." Baillie saw but a single case, and that one he does not particularly describe. Other cases are mentioned by Warner, Kirchner, Walther, and others. Mr. John Birkett records (*Medico-Chirurgical Transactions*, 1858.) a case which he styles one of *Fibrous Polypus of the Urinary Bladder*, but which, from the account given of the microscopical examination, was clearly not fibrous at all. Appended to the report of this latter case is a table of ten recorded cases.

In the case of Mrs. K., no one can fail to be struck with the fact that the tumor acquired so great a size in the short time over which the symptoms denoting its presence extended. Mr. Coulson makes especial mention of the fact that "they seldom acquire a large size, and their growth is not rapid." Indeed, in most of the reported cases of the disease, the history has extended over several months, and even one and two years, before the symptoms became especially marked and urgent. Here, however, we find a growth attaining the size of a large orange in a period of five or six weeks, unless, indeed, we admit that it may have existed a longer time without producing any symptoms indicative of its presence, or interfering with health.

No. 1026 Wabash avenue.

ARTICLE III.—*The Use of the Thermometer in the Diagnosis of Fever.* By THOS. C. MURPHY, M.D., Green Valley, Ill.

Galen defined fever as a preternatural heat. Other additional clauses have since been added, such as quick pulse, turbid urine, etc. But with the advance of science, many of the high-sounding

terms have been swept away. Yet, to-day preternatural heat cannot be blotted out. As during fever there always is an increase of temperature, such increase of heat must arise from an increased tissue-change, and have its immediate cause in alterations of the nervous system.

Now it is plain to see, that the hand is not the proper instrument with which to measure the amount of abnormal heat. A man may shake with a paroxysm of ague until his teeth chatter, he will get as near to the fire as is convenient, in fact he is *cold*. But the thermometer will indicate an increase of heat during the cold stage of from six to eight degrees Fahrenheit. Now, when the physician uses his hand to judge of the amount of abnormal heat, or when the feelings of the patient alone are taken as the measure of his temperature, it can easily be understood how such kind of observation must be doubtful, fallacious and unsatisfactory. The use of the thermometer as a clinical assistant was recognized over one hundred years ago. But at that time it seemed impossible to find a reliable instrument. Now the thermometer is within the reach of all, and the time taken to apply it is so insignificant that the physician or student of clinical medicine has no excuse for neglecting to use it. The careful physician counts the pulse and respirations in all cases of sickness, and it is now incumbent on him to measure the heat. I claim that the use of the thermometer facilitates the clinical recognition of disease, and the progressive physician should use all means at his command to find out "what's the matter," and lack of time is no excuse, for patients soon learn to attend to the instrument, if they are not too sick. What physician is not able to spare his patients from three to five minutes extra time? The less such persons a community is blessed with, the better for them.

The form of thermometer I prefer is the curved one, and the axilla the best situation to place the instrument in, taking care that all the clothing is removed from the axilla. The axis of vision should fall perpendicular on the column of mercury in the tube. In all observations of the temperature note the pulse and number of respirations at the same time.

The temperature of the body is the result of the opposing action of two factors. 1st. Of the development of heat from the

chemical changes of the food, and by the conversion of mechanical force into heat, or by direct absorption from without. Opposed to this is evaporation, which assists in equalizing the heat of the body.

Our best information in regard to the normal heat of the body comes from Valentin, Bernard, Edwards, and Dr. John Davy, of England. All agree that the heat varies in different parts of the body. But they also agree that the normal heat of the body, in completely sheltered parts of the surface, is 98° or 98.5° Fahrenheit. A temperature of 99° or a depression below 97.5° Fahrenheit are sure indications of disease, if the increase or depression is persistent.

As a general rule, an increase of temperature of one degree above 98° Fahrenheit, corresponds with an increase of ten beats of the pulse per minute, if the patient is not under the influence of sedatives. Increase of temperature is always present during fever; we would not have fever if such were not the case. The greater the amount of heat (as measured by the thermometer) the greater destructive tissue-change there is going on. Coldness of the surface is a delusive symptom. I claim for the physician who depends on the use of the thermometer as a guide, greater certainty in his diagnosis and prognosis. The physician should use the thermometer daily, and in all cases, and, if possible, make the observation at the same hour, in the most important cases at least. If called to a patient who has been in good health previous to the attack, should you find the temperature at 105° or 106° Fahrenheit, you may feel safe in saying, the case is of malarious origin. On the other hand, should a patient's temperature range for several days above 98.5° as follows: 1st day, morning, 99° Fahrenheit; evening, 100°; 2d day, morning, 99.5°, evening, 106.5°—morning, 101.5°, evening 102.5°; 3d day, morning, 102°, evening, 103°; 4th day, morning, 103°, evening, 103.5° to 104° Fahrenheit, you may diagnose typhoid fever, even should the usual symptoms of typhoid be absent. But should the rise of temperature be abrupt, to 104° and fall to 98° within the 24 hours, you have not to do with a case of typhoid fever. Constant, persistent elevation of temperature, is as certain of the history of typhoid fever, as that of the sun's setting in the west. Certain febrile diseases are found to give typ-

ical ranges of temperature, or daily fluctuations throughout their course. This is the case in uncomplicated cases. Malarious fever, typhus, typhoid fever, small-pox, scarlatina, measles, rheumatism, pneumonia. In each of the above diseases the temperature is one of the most certain means for determining the real state, as regards morbid disturbances and complications, and a careful observation of the temperature from day to day, is indispensable for judging as to the prognosis. Frequently it affords the best and ultimate means of deciding in doubtful cases, and often it is the best corrective of a too hasty conclusion: for should complications be liable to occur, the increase of temperature will put you on your guard.

A case, recently in my own practice, will serve to illustrate. A case of pneumonia, on the morning of the 4th day gave a temperature of 102.5° Fahrenheit; case doing well, but on the morning of the 5th day I find the temperature 105°; on calling at night, I find a true diphtheritic exudate on the fauces. I am positive there was no exudate in the morning, and there were no symptoms of diphtheria on the morning of the 4th day. If it were not for the aid of the thermometer in the above case, the patient might have been gathered to his fathers.

Again, in typhoid fever, if you find during the third week of a severe case that the temperature has fallen to 99° or 99.5°, the reparative stage has begun—the healing of Peyer's patches and a similar fall of temperature at night, shows convalescence has commenced. The morbid process does not end until the normal temperature of the body returns and remains unchanged through the day and night.

I do not wish any one to think that the thermometer will do all for them, it will not; it is only a useful and trusty aid to the physician, and student. Don't ride it. What would we say of the man who objects to auscultation or percussion? In auscultation we have the advantage that our ears are always here. In percussion the hand is always at hand. We cannot say the same of the hand as a heat measurer, for it don't tell the truth, it fails us here at least, even if "feeling is the naked truth." The live man of to-day must bring to his aid the improvements of the times, seek to elevate himself in his profession, feel that he is interested, and leave the American Medical Association to talk of reform, make stump

speeches, everything only what they claim to do—elevate the profession.

It is no reason that because, perchance, our grandfathers did not use the thermometer we should not—it won't do. Times have changed since Eberle wrote. Calomel and Jalapa are not recognized, to-day, as panaceas for all ills. Progress marks the march of scientific medicine. We must not puff about reform, but assist in doing it.

ARTICLE IV.—*Hydrate of Chloral in the treatment of a severe case of Chorea.* By J. S. WHITMIRE, M.D., Metamora, Ill.

Having been reading up the therapeutic action of the Hydrate of Chloral as it has been published from time to time in our periodical medical literature, and having become satisfied of its powerful remedial agency in the treatment of our common neurotic diseases, I had determined, on the first occurring opportunity, to test its virtues. About the time that I had come to this determination, I was called in consultation with my brother and partner, Dr. Z. H. Whitmire, to see Miss A. H., aged 14 years. She had been afflicted with Chorea for four or five weeks, and had been under the usual treatment for the same length of time. The disease was first manifested in the twitching of the muscles of the face, which gradually extended to the left arm, at which time the parents naturally became alarmed and sought advice of my brother. He directed that her bowels be thoroughly evacuated, and then put her on Ferri. Mur. Tinc., Pot. Chlor. and Ammon. Mur., Spts. Nit. and water, three or four times per day. She was also given Pulv. Assafœtida and Quinine in powders four times per day. A hip bath was recommended at bedtime, and to have her surface well sponged every evening. Her bowels were kept in a soluble condition by mild laxatives, of which Aloes was an ingredient; this, with the hip bath, he supposed would bring on the catamenia, in case that this had anything to do with the exciting cause of her troubles, and, in any event, it could work no injury to his patient, even if it was not the cause of her malady. At the end of a week or ten days, this treatment

proving of no avail, and his patient steadily growing worse, in addition to the above, he dry-cupped her spine every day from the nape of the neck to the lower dorsal vertebra, and as her nights were very restless, with disturbed sleep, he added a Dover's powder at bedtime to induce sleep. Ten or fifteen days more having elapsed without any amelioration of her symptoms, he directed her spine to be blistered, her feet bathed every night, a cup of Valerian tea to be given three or four times per day, with the continuance of the Chalybeate Mixture, and her condition persistently growing worse. About this time I was called with him to see her. I found her the most pitiable object that I ever beheld. By this time she could neither sit, lie nor stand, but was continually in motion, every muscle in her body partaking of irregular motion; her face drawn into the most ludicrous grimaces; her head, limbs and body in constant motion; and unable to articulate a single syllable. She had to be fed by her friends, and very often swallowed both her food and medicine with great difficulty. She had slept but very little for more than ten days, and even when she would get into a disturbed rest, she would awaken in the most terrible alarm, and scream and cry to the extent of her ability, and listen to no attempt that was made to quiet her, till she would be completely exhausted, so that she was in imminent danger, at any moment, of going into general convulsions. She had become anemic and very much emaciated, so that the vital forces were nearly exhausted, and was now entirely incapable of locomotion. And, while I am aware of the fact that but few die of this, without some intercurrent disease, I am convinced that the VITAL SPARK in this case must soon have become extinguished had not an abatement of the disease speedily taken place. I prescribed Griffith's Antilithic Mixture, prepared with Aqua Camphoræ, instead of Aqua Rosæ, as directed by the pharmacopœia, and added an ounce of Sugar and a half-ounce of Tinct. Guiaac. to an eight ounce mixture, of which she took one teaspoonful, in water, three times per day. I continued the Pulv. Assafœtida and Quinine four times per day, and, at night, to procure sleep, of which she had been so long deprived, I administered from ten to twelve grains of Hyd. Chloral, dissolved in two ounces of water. When it was necessary, her bowels were opened

with a mild laxative pill, and her diet consisted of beef tea, all she could be induced to swallow, and soft boiled eggs, till convalescence was beginning to be established, after which she was allowed solid food. For fear of accident, after having given her the first dose of Chloral, I remained at her bed-side till she went to sleep, which was probably not to exceed half an hour, and I then remained an hour longer to observe the effect after she should be completely under its influence. At the end of that time I was satisfied that she would rest the balance of the night, so that I left her without the least apprehension of danger from the medicine. In the morning I found that she had slept SEVEN hours as tranquilly as a babe, having awakened once or twice during the time, but dropped into quiet slumber in a moment after. She was now quieter than she had been for some time, and on every returning evening I repeated the same dose of Chloral till she was clearly convalescent, which was seven or eight days, after which the dose was gradually lessened for a week more, and then abandoned altogether. The Chalybeate Mixture, Assafœtida and Quinine, was continued till her health and strength were perfectly restored, which was probably four or five weeks from the time that the Hyd. of Chloral was first used.

In this case, the Chalybeates, bitter tonics, and anti-spasmodics were clearly indicated, and, as far as they went, were just what the child needed, but they were not sufficient within themselves to fill all the indications of treatment in this particular case —for none of them would, or did, produce rest, sleep and tranquillity—just the three things most necessary to produce a change in her condition. The only thing necessary, in the whole catalogue of remedies, to put my patient upon praying grounds, in this erratic disease, along with the other treatment, was something that would induce sleep, without, in the least, disturbing any of the natural functions of life. This was found in the Hyd. of Chloral, and without it, or its equivalent, she must have succumbed to the exhaustion produced by the incessant involuntary motion to which she was subjected. But the rest and sleep produced by this agent, permitted the vital forces to resume their wonted power, and jaded nature to again build up the wasted tissues and resume their rounded form.

JUNE 22d, 1870.

ARTICLE V. — *Clinical Lecture.* Delivered at St. Luke's Hospital. By JNO. E. OWENS, M.D., Surgeon to the Hospital. (*Thrombosis and Aphasia.*)

(Continued from last Number.)

Now, gentlemen, having finished our remarks upon the leg, let us turn our attention to other symptoms, not less interesting, namely, the paralysis, which manifested itself on the right side, the sixth day after the occurrence of the pain in the foot and leg, and the patient's inability to give expression to his thoughts. The first is called hemiplegia, which, as a symptom, is familiar to you, and of which I need say very little. The second, (impaired articulation) has been designated by several names, but I will only burden your minds with that which seems the best—Aphasia. The word itself means want of speech, and the condition of an aphasic, is, for the most part, one of inability to express thoughts by words, by writing and by gestures. There seems also to be some impairment of the intelligence. There is generally a transitory hemiplegia, which, where it does exist, is almost always on the right side. The symptoms—the paralysis, and the defect in articulation—come on suddenly. Let us see how far the phenomena, in our case, will agree with this definition. You will remember, that he called the nurse at six o'clock, A. M., asking him if he did not intend to get up soon. A few minutes afterwards, the nurse, upon going to the ward, discovered that the patient mumbled his words so as not to be understood. At the morning visit, (half-past ten o'clock,) the right arm and leg, and the right side of the face, were almost completely paralyzed. The muscles of the left side of the face, being intact, drew the corresponding corner of the mouth towards that side. The patient was unable to thrust the tongue from the mouth. The paralysis of the leg was well nigh complete. He was perfectly conscious. This condition of paralysis, you observed, prevented motion on the right side, and, at this stage, the paralysis of the tongue accounted for the inability to speak.

The paralysis, occurring Sunday, October 7th, had disappeared by Wednesday, October 10th, leaving the arm and leg weakened for a day or two longer. Although at this last date, he could thrust out the tongue and move it in every direction, his articulation

was sadly impaired, and he had only several words at his command. "That'll do," "No," and "Yes," composed his vocabulary. You will remember that he used "No" occasionally, and only twice, I believe, did he employ "That'll do." "Yes," seemed to be the favorite, and it was generally repeated rapidly three times in succession—"yes, yes, yes." The word was more frequently an incorrect than a correct answer to the question asked. For instance to the following questions:—"How are you?" "have you much pain?" "what day is this?" "when were you admitted to the hospital?" the common answer was "yes, yes, yes." It seems, then, that when "yes" was a correct answer, it was also incidental, and expressed nothing intelligent. You will remember also, the patient's inability to tell his age. He never could articulate more than "thir," which is but a part of a word, yet he manifested, in his expression, very evident vexation, because of his inability to answer perfectly. When told that he was forty years old, he answered, "no." When told that he was thirty-two, with an expression of satisfaction, he answered, "yes." Hence we must conclude, that this word, which generally signified nothing, could be made an expression of intelligence.

You will also remember that the patient was unable to tell us his birth-place (England), after he became aphasic. And although when told that he was born in France or Germany, he replied, "no," he answered "yes" when England was mentioned. This shows that he knew, perfectly well, his birth-place, and yet except in this peculiar manner, could give us no information upon that point. He could not articulate the word England, any more than he could say France or Germany, or tell us his name. The patient was not even so successful in writing as in speaking. For he was unable to write a single legible word with either hand. Wherever I have known the experiment tried, in health, one, who can write with the right hand, can, with care, write a single word, at least, with the left hand. His attempts to write, resembled, very much, the tracings of that grand humbug—"La Planchette." He always, after attempting to write, threw the slate aside, manifesting the most marked expression of vexation. I suppose we may be allowed to include expression amongst gestures. If so, you will perceive that the patient was as limited in gesture, as he was

in speech. Although, on several occasions, the patient manifested vexation in his expression, yet when asked to simulate an expression of vexation he was unable to do so.

You must not suppose that all cases of Aphasia are exactly like this one. The symptoms are varied and curious. Certain patients, whose modes of expression are as limited as those of the case under consideration, appreciate the relative value of cards, play a good game, and exult over success. An aphasic, a Frenchman, who could articulate "bonjour" could not be made to say bonbon—a mere repetition of the first syllable.

Again, Aphasia frequently sets in without paralysis; there is another class, in which the hemiplegia is but slightly marked and transitory; and a third class, in which the paralysis is more persistent. The prognosis is the most unfavorable in the latter class, because, in this, the brain lesion is the most extensive—the most deeply seated. There is another curious point in connection with this affliction, namely, the paralysis, when it does exist, is almost invariably on the right side. Now what must have been the cause of Aphasia which was persistent, and the well marked hemiplegia which came suddenly, and which disappeared in three days? Hemorrhage into the brain substance does not produce paralysis, so nearly complete as this, without coma. In sudden and complete or nearly complete hemiplegia, with coma, you may be pretty sure of cerebral hemorrhage. Sudden paralysis, complete or nearly complete, without coma, is ordinarily due to the softening of the brain. I felt sure, in our case, that a thrombus had occurred in one of the cerebral arteries going to the left side of the brain; that the paralysis commencing at the time of the occurrence of the thrombosis, disappeared as the collateral circulation became established; that the Aphasia, which had a cause, in common with the paralysis, was kept up from the supervention of softening. Thrombi usually take place in the middle cerebral artery, as it passes through the fissure of Sylvius. An examination, however, of the arteries failed to confirm the diagnosis of thrombosis. It is possible that a thrombus may have occurred in some part of the internal carotid, as it passed through the base of the skull. The body was taken away for interment, soon after the brain was removed, and it was impossible to carry the examination any fur-

ther. This seemed to me the best explanation of a hemiplegia, occurring suddenly, so nearly complete, but disappearing in three days. I should not have expected such a disappearance in case of softening alone. Yet you must not lose sight of the fact that this transitory hemiplegia belongs to a majority of the cases of Aphasia —cases in which neither thrombi or emboli exist. The theories referring to the causation of Aphasia, are, unfortunately, somewhat numerous. Not one of them, however, will withstand pathological research. Indeed, the pathology of this affection seems, as yet, undetermined. If we have one set of pathologists placing the organ for the manifestation of thought by speech in the two anterior lobes of the brain, an authentic case is recorded, where, in a duel, an officer was struck in the temple by a ball, which passed through the two frontal lobes, in their middle portion, and from the first day there had been neither paralysis or any hesitation in speech.* If we have a second set, locating the organ of themanifestation of thought by speech exclusively in the left hemisphere, an equally authentic case is recorded of Aphasia with left hemiplegia.* If we have a third set, locatingt his organ in the posterior part of the third left frontal convolution, a case is recorded, where the autopsy is made by an eminent observer, in conjunction with the originator of the latter theory, and where both macroscopical and microscopical examination forced the conclusion that the posterior part of the third frontal convolution w: s not diseased.* A fourth class have located this organ at the junction of the frontal and middle lobes of the left side. The case which disproves the second theory mentioned, also disposes of this one. We see, then, how very little, that is definite and reliable, has, as yet, been discovered concerning the pathology of Aphasia. We have gained very little information, on this point, from an examination of the brain, which, although removed in due time, was not examined for forty hours subsequently, at which time the whole brain was much softened. It was plainly to be seen, however, that the posterior part of the left frontal lobe, the insula of Reil, a small portion of the middle lobe, the corpus striatum, and probably the optic thalamus, were softer than the surrounding brain substance of the left side, and the corresponding parts of the right side. The autopsy, under

* Trosseau.

the circumstances, I think is not of very much value. Yet the whole case is very interesting. The field is open for the microscopist and physiologist, to whom we look for a better understanding of Aphasia.

112 Randolph Street.

ARTICLE VI.—*Atropia* vs. *Morphia.* By THEO. W. STULL, M.D., Marengo, Ill.

As the antidotal powers of Atropia against Opium or any preparations therefrom, is pretty well established, as a fact in therapeutics, I have thought that perhaps the report of an unsuccessful case of my own, might suggest to others, as it has to me, that the failure should more properly be attributed to myself than to a lack of virtue in the medicine.

April 21st, 1870, was called to see Mr. A. V. L., by the druggist, who, a short time before, had sold the man 10 grains of Morphine (Sulphate), and, by the way, not without the requisite amount of caution. I arrived at 4 o'clock, P. M., and found the man lying on the bed, surrounded with friends anxious and importunate that something should be done at once. The patient seemed calm, and complained that we were raising a terrible "rumpus," and did not want to be disturbed. He said he had taken the ten grains at once, somewhere from half an hour to an hour before. He had eaten ravenously several times during the day, and only a short time before taking the dose had eaten an incredibly large dinner at a dining hall. The breath unmistakably showed that he had been drinking freely. I at once gave twenty grains Sulphate of Zinc in one-third glass of water, which he refused to take at first, but made no resistance when it was urged upon him. In ten minutes it was repeated, and twenty grains of Ipecac. added, he then remarking that he was just now getting into a condition to take a nap. Tickling the fauces was of no avail, and a third dose of the Zinc as well—the stupor coming rapidly on, and he was soon entirely insensible. We had no stomach pump, and I now resorted to the Atropia by hypodermic injection. The pupil was contracted to a pin-head in size, respiration seven per minute,

pulse 120 and skin blue. Absorption was extremely slow, and it was some little time before the dose of $\frac{1}{60}$ grain Atropia Sulph. was absorbed. It was repeated, until in half an hour one-twelfth grain had been given. The result was that the pupil became dilated to its fullest extent, the respiration rose to twelve per minute, and in this condition he remained till death closed the scene, a few minutes before ten o'clock, in the evening. Dr. Hagar came to my assistance about six o'clock, and we improvised a stomach pump from a large gum elastic catheter and a syringe, but it was of little effect, except that we were able to fill the stomach full of strong hot coffee.

And, now, though the physiological effect of the Atropia upon the pupil was maintained throughout, ought not the dose to have been increased? I think it should, and on a similar occasion would not stop short of three-quarters of a grain of the Atropia, deeming that amount nearer an equivalent to the large amount of Morphine taken in this case. I would not be governed wholly by the physiological effect produced, unless it seemed entirely adequate, soon, but rather by the amount of the opiate taken. There was a marked amelioration of the symptoms upon the pupil becoming dilated.

ARTICLE VII. — *Death from the Use of "Hair Restorer."* Report of Committee of Investigation as to the Cause of the Death of Dr. J. M. Witherwax, of Davenport, Iowa. Read before the Scott County Medical Society. By JOHN W. H. BAKER, M.D., Chairman of Committee.

Historic Symptoms.—Something more than three years since, Dr. Witherwax was suffering from pains of an abdominal or colicky character, and at the time attributed them to malarial disease which he thought he had contracted in the South, while serving in the army during the war. He treated himself with that view of his case, and, after protracted treatment finally was somewhat improved; still he was occasionally subject to the pains in a more moderate degree for the next eighteen months. These attacks of pain were usually free from tenderness over the abdominal

region, and would subside after vomiting; these symptoms, causing him at times to attribute his indisposition to something of a dyspeptic character. A little more than a year ago he was attacked again with an increase of the abdominal symptoms and these gradually grew worse until he had anæmic pallor, with evident jaundiced hue of the skin, disagreeable fetor, and bad taste in the mouth, loss of appetite, constipation, emaciation, and muscular debility. Pain in the abdomen gradually increasing, he at length became prostrated, and protracted vomiting occurred, which for several days was so persistent that hardly a particle of nourishment was retained within the stomach. So soon as the mildest nutriment was taken into the stomach it was followed by most distressing gastralgia, and within a short time was ejected, sometimes with a quantity of bile, and at other times with merely a small quantity of gastric juice or slimy mucus. Even after the most aggravated attack, when free from pain, the abdomen was not unusually tender, and never seemed uncommonly tympanitic.

The pains were paroxysmal or spasmodic. There were no evident febrile exacerbations; the increased heat of the body being only evident under the impulse of the extremely severe pains.

Diagnostic Symptoms.—The gradual development of the symptoms, such as the muscular debility; the peculiar character of the pains, such as the drawing, knotting, and obstruction, indicating in its changes, gastric, iliac, and colic varieties of location; the loss of appetite, and the final almost uncontrolable emesis, would and did indicate some other source of disease than the malarial influence left in his system from southern exposure and disease of several years previous. No medical authority would be consistent in attributing to such latent cause the persistency which these symptoms presented, returning, as they did, at intervals of one year in the more severe manifestations.

We therefore turned our attention in search of some other and more definite or positive cause. Having seen several cases of Colica Pictonum, and recognizing the similarity of the symptoms in this case, we were led to the inquiry as to whether our professional brother could by any means have been influenced by Saturnine Poison.

We readily ascertained that he had been in the habit of applying

one of the popular "Hair Restorers," very frequently and copiously to his hair and whiskers, they being naturally almost snow white. With this application he had for a long time had his barber saturate his hair twice each week, and beside this was accustomed to keep a bottle of the same in his office, from which he would occasionally dress his whiskers, during the intervals of its regular application.

Under the directions of the editors of a London Chemical Journal, Mr. Henry Matthews, F. R. C. S., has recently made an analysis of some of the most widely advertised Hair Restorers, and finds that Sulphur, *Acetate of Lead*, and Glycerine, are the ingredients in every one of these much-lauded preparations. The editors of the *Medical and Surgical Reporter*, (Phil.,) in summing up a notice of these examinations, say: "Now it is notorious that the Acetate of Lead is an accumulative poison which in many instances has caused incurable paralysis."

"'Mrs. S. A. Allen's World's Hair Restorer,' by Mr. Matthews' analysis, contains (in an eight and one-half ounce bottle), Sulphur 75.6 grains, and an amount of Lead corresponding to 87 grains of the Acetate of Lead." "'Hall's Vegetable Sicilian Hair Restorer,' a bottle containing six fluid ounces, furnished 70.2 grains of Sulphur, mixed with Sulphate of Calcium, (milk of sulphur having evidently been used in the case,) also Lead, corresponding to 50.8 grains of the Acetate of Lead."

The several other Hair Restorers examined gave a very similar proportion of these ingredients, whether advertised as *Vegetable* or not.

Following these evidences we examined the symptoms indicative of lead poisoning, and find colic among the earliest symptoms; not acute at first, nor of long duration, but frequently returning, and at length becoming intolerably severe. The mouth is dry, generally absence of fever. Sickness of the stomach is present and sometimes vomiting, which will last for several days; abdomen drawn in toward the navel, and the sinking is more observed as the pain becomes more intense. Costiveness is very common and the alvine excretions are discharged with pain and difficulty. Prostration, emaciation, and sometimes paralysis, are the more advanced stages of its prolonged attacks.

Looking at these symptoms and comparing them with the symptoms which were present in the case of Dr. Witherwax, associated with the fact as to the application of the Saturnine Hair Lotion, and one can hardly come to any other conclusion than that the application of the wash and the symptoms can stand in no other relation to each other than as cause and effect. Under this impression Dr. W. was informed that he evidently had the symptoms of a person laboring under the influence of Lead Poison.

For the proof of the correctness of the above conclusion we have the more recent symptoms, and eventual death and post-mortem appearances to record.

About the middle of May, 1869, Dr. Witherwax was attacked with colic pains and disturbed digestion, soon followed by vomiting; these painful attacks occurred most frequently during the night time. After vomiting, the symptoms subsided in a measure, sometimes to be less severe for a day or two, when they would again return. These pains were associated with a constipated condition of the bowels, rendering it necessary for him to frequently take laxative or cathartic remedies, these remedies procuring small scybalous evacuations. At the same time he was accustomed to take an opiate in some form to relieve the pain. A peculiar icteric pallor was permanently fixed in his countenance, and his physiognomy expressed more or less an anxious appearance. Mouth dry, and tongue slightly coated; the uncomfortable taste in his mouth caused him to frequently resort to washing and gargling to remove the fetor. These symptoms gradually increased until about the 12th of June, 1869, when he became completely prostrated, and was obliged to give up his business, and became confined to his couch. His symptoms were now of an aggravated character, in all respects most severe, and the only relief from pain was derived from large doses of Morphia or inhalations of Chloroform. Vomiting of bilious matter, and the ejection of all nourishment; inactive condition of the bowels; extreme dryness of the mouth and fauces. There was very little tenderness over the abdomen, at least not such as indicated inflammation of an acute character. The pulse was only excited to unusual frequency while suffering from severe pain. The extreme prostration, with all the symptoms unchecked by medication, finally terminated his earthly existence, on the 24th day of June.

An autopsy was held about thirty hours after death, in the presence of quite a number of the profession.

In general appearance, the body was emaciated and pale, with ecchymosed spots over a portion of the abdominal surface. On exposing the abdominal contents found the peritoneum congested throughout its extent, both the omental and parietal portions. The intestines were not unusually distended with gas. Stomach, duodenum, and intestines generally, presented a dark color, much darker than usually found in inflammatory affections. Adhesive bands and general adhesive surfaces had formed between the intestines and the parietal portion of the peritoneum, on the right side; these bands and adherent surfaces were apparently of long standing, and probably date back to a severe attack of entero-peritonitis, which he had in New Orleans, during his service in the army. There was no evidence of recently deposited lymph, about the abdominal cavity, either organized or in its more fluid form. On opening the stomach, found it to contain a blackish green slime of the same character of the bilious matter vomited during the last few days of life. The mucous coat of the stomach showed some evidence of disorganization and gangrene. There was an unusual thinning of the coats of the stomach. The duodenum was congested, and exhibited more nearly evidence of recent inflammation than any other portion of the intestinal canal which was examined. Still no evidence of ulceration was found. The ilium, jejunum, cæcum and colon being examined at different points showed a considerable degree of congestion. An inflammatory condition was apparent in the glands of Bruner, which although enlarged and softened in some degree, were none of them found ulcerated. The spleen, of ordinary size, presented a bluish leaden color.

The liver was not enlarged, remaining of about the ordinary size. It presented much the appearance, externally, of having been parboiled. On opening into the substance it presented a light-ocherish color, resembling the color of Scotch or yellow snuff. The parenchyma was easily broken down under the finger, indicating softening of the organ. It resembled the condition usually described as fatty degeneration, with the exception of the enlargement and rounded edges, which are usually present but which were lacking in this case.

Gross, in his Elements of Pathology, says: "In fatty degeneration or fatty liver the organ is always larger than the healthy one, and its edges are knobby or obtuse." This was not the condition presented here; neither was there, as is usual, a fatty deposit on the surface or about the edges of the organ, the whole surface being unusually destitute of fat.

Some authors draw a distinction between adipose infiltration and true fatty degeneration, and observe that the former condition occurs more frequently than the latter. They hence conclude that in by far the greater number of cases of fatty liver they are not to be regarded as a result of mal-nutrition of the hepatic cells, but as the result of causes acting from without. Frerichs says: he "hesitates to identify the destruction of hepatic cells with fatty degeneration, but is disposed to regard an exudation process as the starting point of the disease." Rokitansky, and others, refer the destruction of the hepatic cells to the action of the bile. We hold the opinion that there may be a condition of color and modified organic change in the organ resembling fatty degeneration, but arising from causes so markedly the antipodes of what we usually see in fatty liver that it should not be termed fatty liver or fatty degeneration. In fatty liver the hypothesis is, that there is degeneration of hepatic cells, and this most frequently occurring in individuals accustomed to the indulgence of high feeding and indolence. In the case supposed to resemble a fatty degeneration of the liver tissue, we have no evidence of the degeneration of cell tissue, but a generally permeated circulation of fat globules, evidently drawn from the system by absorption, and serving the purpose of a circulating fluid, rather than a material for deposit in any special organ. We look upon the fatty liver, in its ordinary acceptation, as an increase of organized material; while we look upon its resemblance, as exhibited in the case before us, as the result of an extreme disorganizing force in the system. Of the former of these conditions, we have, as illustrative, the fatty liver of the indolent and gluttonous and the intemperate. While the latter (in resemblance of color and softened substance) occurs in cholera, yellow fever, and such exhaustive diseases as induce great emaciation, lack of digestive stomachic nutriment; hence necessitating a drain upon the body tissues, for the effort to sup-

port life. With these remarks our conclusions would naturally be that this condition found on post-mortem examination of the liver was not the special cause of death.

We will here introduce the microscopic and chemical examinations in the case as reported by the committee of investigation, which were recorded by Drs. Hazen and Cantwell.

To Dr. J. W. H. Baker, Chairman of Committee to investigate the cause of the death of Dr. Witherwax:

Sir:—In conformity with the duty given me on the Committee, I have respectfully to report, that I have examined a portion of the liver, spleen, and kidney of Dr. Witherwax, both microscopically and chemically. The microscopical examination was made in conjunction with Dr. Farquaharson, (also, a member of the Committee). We found the liver to be extremely fatty —the cells gorged with oil globules; no colored granules or masses were seen.

The chemical analysis, a part of which was made in conjunction with Dr. Cantwell, (another member of the Committee,) was also carefully made. A portion of liver was obtained from Dr. French, who had preserved it in a test tube, with acetic acid. There was but a drachm of it, and the tests were delicate in their action. The second portion examined was much larger, and was obtained from Dr. Cantwell, and consisted of a portion of liver, spleen and kidney; these had been preserved in a quinine bottle with pepsin. The analysis in both portions was carried on in a similar way, but separately, and for sake of brevity can be stated as one analysis. The following is a record of the same:

The organic matter of solid and liquid was first boiled in a test tube, *then filtered.*

Liquid portion: A current of sulphuretted hydrogen was passed through for two hours, made by the action of sulphuric acid on sulphide of iron in a retort, and passed over by tube, Pb O, HS = P b S + H O. Filtered and digested with nitric acid. Pb. S + N O_5 = PbO. NO_5 + S. Solution thus made, plus iodide potassium = yellow precipitate, PbO, NO_5 + KI= Pb I + KO. NO_5.

Solution plus chromate potassium=yellow precipitate, Pb O

$NO_5 + K\,O.\,Cr\,O_3 = PbO.\,Cr\,O_3 + KO.\,NO_5$. This was soluble in hydrate of potassium.

The solid portion that remained upon the first filtration was then examined. Mixture was evaporated to dryness, and the dry mass incinerated in a porcelain evaporating dish on a sand bath. This was boiled with water, filtered, and digested with nitric acid.

This solution the gas was passed through, as in the case of the liquid portion, and then put through the same tests, with like results. By this process, twice repeated, the analysis was made of the liver four different times, twice by *filtrates*, and twice by *incineration* and *digestion* of the solid matter.

Each analysis proved the presence of *lead* in the system, and the repeated processes confirm the fact.

I am, respectfully,

E. H. Hazen, M. D., *Member of Committee.*

CHEMICAL ANALYSIS, BY DR. CANTWELL.

Dr. Baker: *Sir*—As a member of the Committee (of which you are chairman) for the purpose of investigating the cause of the death of the late Dr. Witherwax, I submit to you the following synopsis of a chemical analysis which I was requested to make. At the time of the post-mortem examination Dr. French gave me a small portion of the liver, spleen and kidney. They were wrapped all together in a white cotton cloth. The same day I commenced my analysis; first of the liver, then of the kidney. As the analysis of each was the same, and for the sake of brevity, I will give the result of each together, so far as practicable.

ANALYSIS.

I took about an ounce of the organic matter (the liver), and cut it into small portions, then put it into a porcelain dish, then poured over it a drachm and a half of hydrochloric acid, then added enough water to make a thin paste. The dish was then placed over a sand bath for one hour and a half. In the meantime a few grains of chlorate of potassa were dropped in at intervals of fifteen minutes. At the expiration of said time, the mass was of a white homogeneous character, the odor of chlorine had all passed off. I then added some more water, and set it on the sand bath to cool. After cooling it was passed through a filter,

leaving a *filtrate* and *residue.* The filtrate was then taken and had sulphuretted hydrogen gas passed into it for twelve hours, which gave the following results:

Filtrate + HS for 12 hours=*PbS* + HCl, precipitate dark.
PbS. + heat & HO. NO_5=PbO. NO_5 + HS, precipitate soluble.
PbO. NO_5 + HO. SO_3=*PbO. SO_3* + HO. NO_5, precipitate white.
PbO. NO + KO. HO=*PbO. HO* + KO. NO_5, precipitate.
PbO. NO_5 + KI = *PbI* + HO. NO_5, precipitate yellow.
PbO. NO_5 + KO_2 Cr O_3 = *PbO_2 Cr O_3* + $KONO_5$, precipitate yellow.

The above were all slight, but the two latter were best. Fearing the lead was not all out of the first filtrate, I applied the same tests, and in every case had faint indications of lead. Doing so with both liver and kidney, caused me to make four examinations in the wet analysis.

BLOW PIPE ANALYSIS.

I took the *residue*, and mixed it with carbonate of soda, then placed it on a piece of charcoal, which was put under the inner blow-pipe flame. The liver gave merely a slight yellow incrustation, not very satisfactory. Afterwards tried the residue from the kidney in the same manner, from which I not only procured the yellow incrustation, but two small granules. One of the granules was placed under the microscope by Dr. Hazen and myself; we then discovered a crystal which resembled *acetate of lead.* This makes in all six analyses that I have made, and, from the many and varied results which I have witnessed in making these examinations, I can say, with little hesitancy, that there was a great deal of *lead* in his system. I therefore think that it was one of the principal causes of his death.

With these remarks I most respectfully submit this report to you for your consideration.

ALONZO W. CANTWELL.

Grisolle, who wrote an essay upon lead colic some years since, has given a very correct account of this disease, illustrating the many and variable effects of this metal. He says, "Of the various accidents which result from the absorption of lead and its *different preparations* into the system, those which belong to the digestive apparatus are the most frequent."

The question now naturally arises as to the manner in which poisoning could take place in using these hair lotions. Authors admit three ways by which lead may be introduced into the system, viz.: by absorption through the skin; by inhalation through the pulmonary organs or lungs; and through the gastro-intestinal organs by direct exhibition, or swallowing. We conclude that through the first two methods the poisonous effects of the hair restorers are manifested. The use of these liquids affords not only the opportunity for absorption from the scalp surface, but also creates an atmosphere loaded with the vapor of lead and sulphur, which is constantly inhaled by the individuals in the habit of using them.

In conclusion we would say, that in many respects it might be better that the old assertion were true among mankind, that, "We cannot turn one hair black or white," or that we should answer negatively the question, "Can the leopard change his spots?"

ART. VIII.—*Case of Purulent Pleurisy.* By JOHN W. H. BAKER, M.D., Davenport, Iowa. Read before the Iowa State Medical Society, Feb 24th, 1870.

We seldom find more interesting cases than those frequently occurring and usually denominated pleuritic effusions. These cases most commonly arise from acute pleuritis, or the associated disease, pleuro-pneumonitis, and such cases are rendered more positively interesting in tracing its progress either to recovery or death. In this connection I report the following case:

On the 4th day of September last, I was called to visit Otto S——, a young man of a robust, healthy habit, about 21 years of age. He had always enjoyed uninterrupted good health. Had been accustomed to go on hunting excursions upon the river, and about the sloughs and islands below the city. Had been on one of these hunting excursions a few days previously, and became wet and cold. He thus remained out upon one of the islands over night, sleeping in an exposed open space. On his return he was aware that he had taken cold, and the result was an attack of

most violent pain on the left side, in the cardiac region. When I arrived I found him suffering with sharp, cutting and lancinating pains, with short checked respiratory efforts, marked febrile excitement. The pains were much increased on effort to get a full inspiration. Skin was dry and hot. Tongue moderately coated. Pulse full, frequent and incompressible. Associated with these symptoms were intense thirst and torpor of the bowels. Put the patient under treatment; gave active cathartics, applied counter-irritants and heat; gave an opiate after the action of the cathartics, and endeavored to promote perspiration. Inflammatory symptoms were quite persistent, and the pain and prostration of the most marked character, indicative of acute pleurisy for the period of ten days or thereabout. After the subsidence of the severe pains, the thoracic walls upon the left side, in the region of the pain, showed a bulging or prominence over the cardiac region. Upon percussion, the locality gave an extended dull sound, while auscultation evinced a masked sound of the heart. The action of the heart was violent; so much so as to create a cardiac tremor over the whole left side. Respiration was impeded on the left, and in all the lower lobe was destitute of the ordinary vesicular murmur. Upon succussion, the manifest presence of liquid could not only be felt but was easily heard, even by persons sitting by the side of the bed, giving the sound of liquid and air confined in the same cavity. Counter-irritants and absorbent remedies, cathartic and diuretic medicines, were tried for the next ten days, when the increased prominence of the left side, and the marked protrusion between the ribs, indicated the necessity of puncture. During all this time the patient had suffered intensely, being greatly emaciated, and presenting an almost hopeless condition.

On the 24th of September, twenty days from the commencement of the attack, being fully convinced that the only hope for the patient (and that a small one) was by puncture, I called in counsel, and, as the result of advice, punctured at a point two inches in a direct line below the left nipple, that point indicating a thinning of the thoracic walls, and an approach of liquid contents to the surface. With a sharp-pointed bistoury, the incision was made through the skin and cellular substance, which opened directly into the cavity containing air and purulent matter. The patient lying directly on his back at the time of puncture, rendered the

first issue of material from the cavity necessarily air or gas of the most fetid odor. After the air had escaped, as from a compressed sac, with a hissing noise, the prominence was somewhat diminished, and we turned the patient partly on his left side, when a very consistent and terribly odious pus was caused to flow from the punctured orifice; occasionally the incision would become blocked by thickened masses of shreddy pus, when by means of the probe they would be broken down, and the flow established again. About three pounds of matter were in this way removed. We then dressed the wound with plaster and compress, and the patient acknowledged that he felt some relief. For the next ten or twelve days we removed each day from a half pound to one or two pounds of pus, being careful that the opening was as well guarded from the entrance of air as possible. About this time, finding the issue of matter to be about the same from day to day, and the evidence of a large amount of purulent matter still retained in the thoracic cavity, and having acted on the cautious plan of evacuating only a portion of the contents at each time, we concluded to try a means of more completely emptying the cavity, and for this purpose arranged a medium sized catheter, so as to form, with some rubber tubing, a syphon. To the rubber tube we attached a rubber suction ball. With this apparatus we introduced the catheter end into the thoracic cavity, passing it some six inches into the liquid contents, then with the air expelled from the suction ball, we attached it to the rubber end, which thus exhausting the tube, caused the purulent matter to flow in a continuous stream. The tube occasionally blocking up, with the ball we would force the flow again. In this way, at this time, we removed five pounds of thick offensive pus from the thoracic cavity. This operation was repeated daily, obtaining on one other day six pounds, and subsequently from half a pound to a pound of matter each day. We made memoranda of the amount removed until it amounted to over thirty pounds: meanwhile we were giving the patient Iron and tonic remedies, and such treatment as the symptoms from time to time indicated, the case necessarily requiring a variable treatment. For instance, during a certain stage of this sickness, the patient was attacked with dysentery, and required active remedies to control the dysenteric stools, which were frequent, bloody and painful. At

another time, he had indications of a positive pneumonitis, and required remedies for the complication. But, aside from these complications, the general indications were for a tonic course, with nutritious diet, and anything tending to support the strength and nourish and support the waste of tissue, so actively in progress, evidenced in the discharge of such large quantities of purulent matter.

Continuing our efforts to exhaust this fountain of pus, we were considerably troubled with the blocking up of our tube, and finally tried a variety of means, such as the attachment of an air pump or stomach pump, to force the obstructing mass through the tube, but without success. The quantity continued about the same (about eight ounces) each day. We then obtained a very strong ball from an old fashioned ball breast pump, and in the place of our smaller and weaker suction ball, used this. Still our tube would occasionally block up or become obstructed. We finally concluded to withdraw the tube whenever it became so obstructed, and by so doing we discovered that the obstructing matter consisted of floating masses of shreddy, fibrinous tissue, which being caught in the eye or opening of the catheter, could be brought to the orifice or puncture, when, by great care, they were seized with a small pair of spring forceps, and carefully removed. In this way, on one occasion, we removed about eight ounces of this membranous floating material. After the removal of this quantity of shreds, the character of the matter removed was less offensive, and very gradually lessened in quantity. The cavity was evidently diminishing in its capacity, for we now began the use of injections of a solution of carbolic acid. Our first injections were of about one pound of liquid of the strength of ten grains of acid to the ounce. We injected with this fluid about once each week, gradually increasing the strength, obtaining good evidence of amendment after each injection. A gradual improvement of the respiration occurred, keeping pace with the lessening of the discharge. The superior portion of the left lung became more active, the right lung quieting down to a more natural action, having previously performed almost the whole function of both lungs.

The amount of matter drawn from this cavity lessened from time to time, until after five months and about ten days the forma-

tion of matter wholly ceased. The general health and fleshy condition of this patient has been fully re-established. He is now able to do moderate work, and looks robust.

This case is interesting, from the severe and very marked symptoms in the commencement of an acute pleurisy; the rapid progress made to a stage in which effusion took place; the large amount of effusion, and the peculiar prominence of the thoracic walls; the approach of the liquid contents toward the surface and final presentment at the peculiar point where opened. Finally, it is interesting in the extremely large amount (over fifty pounds) of thick cream-like pus and shreddy formations which were removed; and what is most remarkable is, that the patient should have recovered from a disease so generally fatal in its results.

We claim that the method, together with the continued and persevering removal of the purulent accumulation, contributed largely to bring about so desirable a result, while we acknowledge a strong, robust and healthy constitution as a helping handmaid in this case.

ART. IX.—*Double Vagina.* By J. C. DAVIS, M.D., Fort Atkinson, Jefferson county, Wis.

Miss E., of Rock county, in this State, aged twenty-one years, of medium size, and apparently of a good constitution, called at my office to consult me in regard to her health, which she stated had been failing for the past two years, in consequence of having taken cold during menstruation, which brought on prolapsus uteri, as she had been informed. But upon examination per vaginam, I found it to be retroversion of the uterus; and when attempting to replace the same, I discovered a septum commencing at the mesial line, (in a line from right to left,) attached to meatus urinarius, and extending laterally and posteriorly two-thirds of the way to the fourchette, and within the vulva and hymen.

The external genital organs are well developed. The mons veneris well covered with hair. The labia majora and minora are perfect

Its internal attachment commenced within that of vagina to uterus, and extended half around to anterior and posterior mesial line, thence by its edges to anterior and posterior vaginal walls, leaving the os uteri in the right vagina, (or vagina proper,) which is of normal size, shape and capacity.

Original Translations.

ARTICLE I. — *Experimental Physiology.* Experimental Investigations relative to the Directions of Rotary Movements due to Unilateral Encephalic Lesions. By Dr. J. L. PREVOST, Member of the Biological Society.

OF THE VARIOUS ROTARY MOVEMENTS OBSERVED IN ANIMALS.

Since Magendie directed the attention of physiologists to the phenomena of rotation which are manifested after wounds of one of the middle cerebellar peduncles, numerous experimenters have investigated these phenomena, have described them, and have endeavored to interpret them in various modes.

A consideration of these investigations will convince one that physiologists are far from agreeing upon the varieties of movements induced by lesion of this or that portion of the encephalon.

Before analyzing these different varieties of movements, I will first indicate one cause of the confusion and obscurity which I have observed, and which must have embarrassed all who like myself have been engaged in investigating this subject: I refer to the determination of the direction of the movements induced. I will explain:

The different kinds of circular* movements observed in animals may be arranged in two groups: *the circular movement* (mouvement de mènage)† and the *gyratory* movement or *rotation upon*

* I shall not examine here the movements not included in the circular type, and particularly those which result from wounding the semi-circular canals of the ear as Flourens taught.

† The circular movement (mouvement de mènage) upon a short radius may indeed be compared to the circular movement performed around the

an axis, all other movements being only varieties of these two groups. It might even be added that these two groups are themselves but derivatives one from the other, for as Brown-Sequard has remarked:*

"Rolling is, generally, only an exaggeration of turning (or the circular movement), that is to say, when there is diminution of the intensity of the cause which induced the rolling, this same cause induces turning."

It is easy to comprehend the meaning of an observer who, in speaking of the circular movement, says that this movement is made from left to right, or from right to left; the reader, indeed, placing himself in the centre of the circle described by the animal, appreciates perfectly the impression of the observer.

But the same cannot be said, when the rolling movement is considered. When a physiologist, in describing an experiment, says that the animal turns upon its axis from right to left, that it rolls from right to left, that it rolls from the side of the lesion or from opposite to the lesion, the reader is much embarrassed, and may interpret the phenomena in different modes. I am even tempted to believe that discussions have arisen from misunderstandings occurring between experimenters holding essentially the same opinion.

The mechanician or the physicist who describes the rotatory movement of a cylinder, first takes the precaution to describe the position which he holds in relation to this cylinder. If he wishes to describe the direction in which the cylinder turns upon its axis, the physicist would do it by reference to himself, the observer, by supposing himself extended in the axis of the cylinder according to a determinate direction. If the cylinder rolls upon the ground, the physicist would say that the cylinder rolled from one side or another in reference to an observer placed in this or that position.

Physiologists have completely neglected this precaution; hence

posterior extremity of the animal, and which has been described by MM. Brown-Sequard and Schiff. See *Compte rendu Soc. Biol.* 1853, p. 167, and *Journ. de Physiolog.*, t. V.; Schiff, *Physiologie des Menschen.* Lahr, 1859, p. 348.

* *Note sur les mouvements rotatoires. Jour. de Phys. du Dr. Brown-Séquard*, 1863, t. III, p. 721.

the obscurity which I have indicated with so much the more propriety, since it appears that the terms *rolling* and *turning* have frequently been employed interchangeably.

Some observers appear to have described the movement substituting themselves in the place of the animal subjected to experiment; others, on the contrary, have described under the name *rolling*, the changes of position of an animal upon the ground, in relation to an observer looking toward the posterior extremity of the animal. This last mode of observation appears to have been most frequently employed, although the place occupied by the observer in relation to the animal under experiment is undetermined.

It is thus that M. Vulpian regards the movement of rotation when he makes the remark that the rolling is made in the inverse direction to the circular movement (mouvement de mènage) or turning.*

This difference in the direction of the two movements originates from this cause solely, that in rolling a new factor—the friction of the ground—is added, a point upon which too little stress has been laid, in my opinion. Thus when the experiments are performed upon animals whose mode of progression is swimming, there is often exhibited, as M. Vulpian has observed in the tadpole of the frog,† a movement representing a sort of spiral. What I assert will be better understood if it is remembered that the movements of rotation are made from the side indicated by the direction of the eyes; not that I would make of this deviation the cause of the rotation, an opinion advanced by Henle.

It is sufficient to substitute oneself for the animal under experiment in order to fully appreciate the phenomena. If, indeed, I effect a deviation of my two eyeballs from the right side, I should turn circularly (en mènage) from left to right.

If I am placed upon my feet, I would turn around my axis, always from left to right, in effecting a spinning movement

* Leçons sur le Phys. du Système Nerveux, p. 586.

† Vulpian mouvement de rotation observés chez les telards de grenouille à la suite des lesions pratiquis sur le centre nerveux,—Examen critique des deverses explication proposés au sujet des mouvements que l'on determine ainsi (Mem. de la Societe de Biologie, 1861.)

(mouvement de toupie).* If I am extended upon the ground I would continue to turn upon my axis from left to right, but encountering the resistance of the ground, I should displace myself in consequence of the friction; and for an observer placed at my feet and observing me rolling, I *should roll from right to left*, whilst continuing to turn myself upon my axis from left to right.

Rotatory movements produced by lesion of a cerebral hemisphere.

The rotary movements induced by lesion of one of the cerebral hemispheres, have been much less studied by physiologists than those which depend upon unilateral lesions of the isthmus of the encephalon; this is readily comprehended, for these movements are very distinct only in the higher animals, and are generally less energetic than those which are induced by lateral lesions of the isthmus.

The rotatory movements resulting from lesion of one cerebral hemisphere are all comprised in the class of circular movements (mouvement de mènage) the circle described being greater or less. But is this circular movement executed always in the same direction? Upon this point physiologists are not agreed.

M. Longet,† relying especially upon experiments made upon rabbits, admits, as does M. Lafargue,‡ that in the case of the lesion of the thalamus opticus, rotation is made from the side opposite to the lesion; from the stronger towards the weaker side, as in the case of the lesion of one of the cerebral peduncles. Flourens, on the contrary, by wounding the optic thalamus, found that the rotation was made from the wounded side; whilst a rather deep injury of one of the tubercula bigemina, effected upon a bird, occasioned rotation from the side opposite to the injury, and in reptiles from the side of the injury.

M. Schiff§ sought to explain these variations of authors by

* This expression has been very happily employed by M. Mesnet. See *Physiol. Path. des mouvements circulaires*, by M. Mesnet; *Arch. de Med.*, 1861, t. I.

† Longet, *Traité de Physiologie*, 1850; t. II, p. 408 et 409. See also Physiol. du Système Nerveux.

‡ Lafargue. Thèse de Paris, 1838.

§ Schiff, *loc. cit.*

showing that the direction of the circular movement varies according to the portion of the optic thalamus which was destroyed. After these experiments upon the higher vertebrata (rabbits), he concludes that the destruction of the anterior three-fourths of the optic thalamus determines circular movements toward the wounded side, whilst destruction of the posterior fourth induces movements towards the side opposite to that of the injury.

M. Brown-Sequard * has subsequently confirmed the opinions expressed by M. Schiff.

The variations of authors have concerned especially the interpretations of injuries which approximate the isthmus; now, in wounding the posterior portion of the optic thalamus, it is possible to involve the peduncles and thus complicate the result. I believe that I can sustain by evidence that at least amongst mammiferæ, the highest in the series, and hence approximating most nearly to man, the circular movement takes place invariably from the side of the injured hemisphere; this opinion has also been admitted by M. Mesnet.†

The proofs which I can furnish are the following:

I shall cite first, four experiments of MM. Philipeaux and Vulpian, which are strongly confirmatory in this direction: "On the 26th of June, lesions of the brain proper were effected upon four dogs, after having removed a disk of the cranium by the aid of the trephine. Upon two of these, a transverse incision of the left cerebral hemisphere was made, care being taken to make the incision as much as possible in front of the corpus-striatum. From a third dog a portion of the left hemisphere, a little more than a cubic centimetre, was extirpated through an opening made in the cranium; and lastly, the left cerebral hemisphere of the fourth animal was *ploughed up* by means of a small iron blade.

"All these dogs, subsequently to the operation, exhibited a slight degree of hemiplegia of the right side, more marked in the anterior than in the posterior paw, and they all turned in circles (en ménage) from right to left, but slowly as they were forced to walk. In cases of this kind the hemiplegia was clearly perceptible although it was slight, for the animals yielded often in the

* Brown-Sequard. *Note sur les mouvements rotatoires.* Journal de Physiologie, 1860, t. III.

† Arch. de Med. *loc. cit.*

limbs of the affected side: these limbs would sometimes even bend under the animal which then fell upon the corresponding side."

These facts furnish valuable data in veterinary medicine. The "sturdy" in sheep furnishes us experiments ready made, in which the deep layers of a hemisphere have been injured, while the superficial are intact.

But veterinarians in their observations do not agree about the direction of the circular movements described by the diseased sheep, and the most opposite opinions have been advanced upon this point.

Attracted by these divergencies of opinion, M. Reynal has prepared an abstract of sixty observations of "sturdy" made with great care, and followed by autopsies; of these he has made a most interesting memoir, in which he compares the direction of the movement executed by the sheep with the position occupied by the entozoon in the brain.

From these numerous facts M. Reynal draws the following conclusions:

"We have observed sixty sheep affected by 'sturdy,' and have taken, or caused to be taken, careful notes of the symptoms and morbid lesions. Upon more than half, we have observed that the sheep turned from the side upon which was the worm, whether this be at a point upon the surface of the brain, or whether it be found in the thickness of the layers which form the superior plane of this organ. We have constantly perceived the animals execute circular movements from the side where the cænurus had established its place of abode. The same was the case when the cænurus was contained in the large ventricles and leaving intact the parts upon which it rested; it impressed no modification upon the cerebral substance other than the production of a thinning of the layers which form the floor of these cavities.

"The sheep turned, on the contrary, the most frequently from the opposite side where the destructive work of the cænurus had involved the deepest layers of the brain, or produced changes in the form of the corpora-striata, the cornua-ammonis, the optic-tha lamior the cerebral triangle. However, when these last lesions exist, the animals do not always turn; often, without following a straight line, they walk forward deviating as much to the right as

to the left; locomotion is slow, limited and tottering. It is even usual in this condition to see symptoms of general paralysis, with considerable diminution of sensibility. These last symptoms, somewhat nearly, may be observed, when the cænurus exist in the cerebellum, or when this last undergoes compression, by reason of the space which the worm occupies in the ventricle of the brain. Only there is greater feebleness of movement; they are executed in an automatic manner, the sheep falls frequently, the least obstacle occasioning its fall."

It may be seen, from this passage that the revolution is executed from the side opposite to the seat of the cænurus, only when the deep-seated portions approximating to the encephalic isthmus are found more or less attacked. The results are then very variable, and the same homogeneity in the symptoms is no longer observed.

I shall now present the results with which my personal experiments have supplied me.

The cerebral hemispheres assume, as is well known, a degree of importance, relative to the execution of voluntary movements, so much the greater as the subject is placed higher in the scale of animal life.

The isthmus of the encephalon and its dependencies, on the contrary, acquires, relative to the execution of movements, importance greater in relation to the brain, as it descends the animal scale. This is a well known fact which has been very clearly elucidated by M. Vulpian, in his *Lecons sur le Système Nerveux* (p. 667 et suiv.)

A lesion extending from a cerebral lobe, its removal even will not occasion in the frog any trace of paralysis; in the bird there will be no hemiplegia. In the mammal, on the contrary, hemiplegia will appear, and will become more and more decided in proportion as the subject under consideration may be higher in the mammalian series. Obscure in the rabbit, it will become evident in the sheep, the dog, etc.

But if the hemiplegia produced in the dog, by lesion of a hemisphere, be compared to that which is observed in the same case in man, the difference in the intensity of the symptoms will be striking. In man, a very circumscribed lesion of a cerebral hemisphere, located in the corpus-striatum, for example, will pro-

duce hemiplegia of the opposite side, with complete resolution and flaccidity of the limbs. The removal of an entire cerebral hemisphere in the dog will, on the contrary, occasion only a very partial hemiplegia.

There is a fact which must not be forgotten in the examination of rotary movements produced by lesions of the cerebral hemispheres. By making an extensive lesion of a cerebral lobe in a frog, or by the removal of the entire lobe, it is rare to observe them, unless some injury be inflicted on the tubercula bigemina, so voluminous in this animal in comparison with the hemispheres; it is rare, I say, to observe a movement which represents the rotatory movement. I have, however, believed that I have sometimes remarked immediately after the injury, a tendency to leap from the side of the injury, a sort of outline of a rotary movement; but there was in it nothing comparable to the phenomena which are produced when the isthmus is injured in the frog, facts which I shall examine hereafter.

In the mammiferæ, the results are very different. Thanks to the kindness of M. Vulpian, I have been enabled to make in the laboratory of pathological anatomy of the Faculty of Medicine a certain number of experiments upon dogs and rabbits.

These experiments given below, together with the aforesaid facts, demonstrate that lesions of a hemisphere occasion a rotary movement from the side of the injury, and that this movement, better marked in the dog than in the rabbit, probably on account of the predominance of the action of the brain, becomes more manifest when the deep layers of the hemisphere (corpus striatum, optic-thalami, and even the cerebral peduncles) are injured.

In the course of my experiments I have not had the opportunity to verify the opinion of M. Schiff relative to the direction of rotation from the side opposite to the lesion, then from the wounding of the superior portion of the optic thalamus, for I have never produced an injury limited to this level. The rotation produced in my experiments by injury of the optic-thalami has always taken place from the side of the injury. I will say the same of the lesion of the cerebral peduncle in experiment I.

I place at the head of these experiments the observation upon a dog which I presented to the Biological Society, and which is remarkable in consequence of the recovery of the animal, and of

the persistence of the rotary movements. There will be found in this experiment several data important in regard to the theory of movements of rotation.

DEEP WOUND OF THE RIGHT HEMISPHERE, TRAVERSING THE RIGHT CEREBRAL PEDUNCLE; ROTATION OF THE HEAD AND OF THE EYES FROM THE RIGHT SIDE; CIRCULAR MOVEMENT FROM LEFT TO RIGHT, REMARKABLE FOR ITS PERSISTENCE; LEFT HEMIPLEGIA.

Exp. I. An adult bitch of medium size. The 24th of December, 1867, I perforated with a gimlet, having a diameter of two or three millimetres, the cranial vault of the right side, and buried the instrument deeply into the brain.

The animal described immediately a circular movement from left to right; he inflected the head slightly to the left side, directing the vertex to that side, so that the left eye should be upon a lower plane than the right; he turned, on the contrary, the muzzle to the side of the right shoulder.

The two eyeballs were both directed to the right, the left iris being carried into the internal palpebral angle, the right iris into the external palpebral angle, the left sclerotic visible, on the contrary, in the external angle, and the right in the internal angle of the palpebral openings. The right pupil was very much dilated, the left contracted; there was nystagmus. In describing the circle, the dog bent himself into an arc with its concavity directed towards the right. A decided left hemiplegia was observed, especially marked in the anterior limb, which often yields and shrinks under the animal. In walking, the dog frequently places his left fore paw upon its dorsal face, then the limb doubles up under him, and he falls on his right side.

Sensibility is diminished in the paw of the left side.

During the following days the dog remains downcast and sick, exhibiting the same symptoms; but he is not slow to recover his appetite and spirits, in brief, to recover completely from the general symptoms due to the operation, as may be very well observed; and it is the state which he then presents that I am about to describe in detail.

The dog is intelligent, and recognizes me very well, and each day when I come, before seeing me, he detects my voice and even

my step, and manifests his joy by cries, for I am in the habit of feeding him myself.

The paralysis of the left side has diminished, but is however still manifest, especially in the anterior limb, which yields under the animal, especially when he is roughly pushed. The disturbances of mobility have never been very apparent in the posterior limb.

Sensibility is diminished in the two limbs of the left side, for it is necessary to pinch the left paws much more vigorously than the right to induce the animal to withdraw them, or manifest pain. The head is habitually slightly inflected to the left, the vertex being directed to the left side, the left eye nearer to the earth than the right; the muzzle, on the contrary, is turned to the right side, but there is no stiffness in the neck, the head may be turned as well to the left as to the right. The animal, however, of his own accord, only turns it slightly to the left side, and his body is generally bent into a slight curve, the concavity being directed to the right side.

Editor's Book Table.

Fourth Annual Report of the Metropolitan Board of Health of the State of New York. 1869. New York: D. Appleton & Company, 90, 92 and 94 Grand street. 1869. Pp. 564.

The present volume is, we should say, practically the most valuable one of the series indicated.

The Sanitary Board, under Superintendent Elisha Harris, M.D., assisted by Moreau Morris, M.D. and R. Cresson Stiles, M.D. together with a corps of ten medical inspectors, have accomplished an amount of work of which both they and the profession represented have reason to be proud. It is possible that New York City is, as the newspapers assert, badly governed, but the book before us proves that its Sanitary Board is worthy of the highest praise. A student of hygiene can scarcely find elsewhere a more

complete resumè of what sanitary science demands and is capable of affording.

Some idea of the magnitude of their work may be gathered from the fact that the number of reports for the year were 28,321. This included, in addition to the ordinary routine of duties, special investigations having for their object the thorough reconstruction of tenement houses, the closure of uninhabitable cellars, the protection of the city against small pox, by systematic vaccination, the inspection of immigrant vessels, the suppression of the sale of dangerous kerosene, the analysis of the milks brought to market and sold to families, the examination of the flour and bread used by the poor, the analysis of the air of public halls, schools, churches, etc., etc., microscopic and other observations on the water in use, plans for flushing the streets and sewers with salt water, for regulating the manufacture of gas, for improved methods of ventilation, etc., etc.

The vital statistics are presented by Superintendent Harris in a very clear and satisfactory manner, and, by means of a folding leaf, a diagram presents the general result most impressively.

We wish books of this character were more generally sought after by the profession, even though the money they cost had to be taken from investments in "Materia Medicas" and badly tasting and smelling drugs. But the time is coming rapidly when the laws of life and health will command their appropriate study.

Superstition and Force. Essays on the Wager of Law—the Wager of Battle—The Ordeal—Torture. By HENRY C. LEA. Second Edition, revised. Philadelphia: Henry C. Lea. 1870. Pp. 480.

The name of Lea—father and son—has been familiar to all medical book readers of this and the preceding generation. The great Philadelphia publishing house, by sagacity and tact in the choice of material for publication, by liberal arrangements with authors and honorable dealings with the public, have commanded success as well as high business distinction. But, perhaps, it is not generally known, to the profession, that the present representative of the old house, Henry C. Lea, has by several of his own productions manifested a variety and exactness of acquirement, a

scholarly culture and philosophical power, which have rarely been equaled and still more rarely surpassed by any American author.

The subjects discussed in the present work are sufficiently set forth in the title. In one sense they are not medical, but in a higher sense they fall within the physician's domain. All influences that sway human minds, co-operate with the physical influences that move the atoms of the body. The grandest sphere of the physician's art is that which comprehends his power of influencing the corporeal changes by the high powers of the mind. Even educated medical men are too apt to neglect this grandest therapeutic energy, leaving it to be prostituted to the base uses of pitiful exclusivists and charlatans. When the surly English physician advised the medical student to read Don Quixotte as the best means of preparing himself for practice, we are not so sure but he intended a useful lesson. We are *quite sure* that Don Quixotte describes certain peculiarities of insanity much more successfully than does a recent essay specially devoted to the topic.

It is unfortunate that Psychological Medicine, so called, is too often taught merely as a speculative abstraction, or else as a means of conveyance of the grossest materialism tricked out in scientific phraseology. The best study of Psychology is afforded in the careful perusal of the works of painstaking, conscientious and impartial chroniclers of the operations of the human mind in times gone by, direct observation of mental actions now, both by personal association and reading, and then correction of all judgment by common sense. The practitioner or student who thinks he finds all of medical science in the technical anatomies, physiologies, materia medicas, or even cyclopædic works on "principles and practice," is as much at fault as one who expects to master metaphysics and the moral law by the scalpel and microscope. Physical forces correlate, but they correlate in a proportion expressed by numbers. Who will give us the numeral equivalents for Hamlet or—Dan. McFarland?

But, *revenons a nos moutons*—we know of no single work which contains, in so small a compass, so much illustrative of the strangest operations of the human mind. Foot notes give the authority for each statement, showing vast research and wonderful

industry. We advise our confreres to read this book and ponder its teachings.

[NOTE.—All works reviewed in the columns of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN & COOKE, whose catalogue of Medical Books will be sent to any address upon request.

Pamphlets.

As regards Protoplasm, in relation to Professor Huxley's Essay on the Physical Basis of Life. By JAMES HUTCHINSON STIRLING, F. R. C. S., LL.D., Edin. New Haven, Conn.: Charles C. Chatfield & Co. 1870. Pp. 71. For sale by S. C. Griggs & Co., Chicago. Price, 25 cents.

This is No. 3 of the University Series, the two former of which have been noticed (*vide* p. 230). It is one of the best of the numerous answers to Prof. Huxley's "premature generalizations." The publishers of this cheap series of valuable lectures and essays are conferring a great favor on the reading public. We notice that they are receiving numerous orders in advance of the publication or even announcement of forthcoming papers. This confidence is fully merited.

The Bromides; their Physiological Effects and Therapeutical Uses. By Z. C. MCELROY, M.D., Zanesville, Ohio, President of the Muskingum County Medical Society. [Reprinted from the New York Med. Jour., July, 1870.] New York: D. Appleton & Co. 1870. Pp. 26.

This paper, characterized by the careful study and close thought of its author, well known to our readers, concludes with the following propositions, which, aside from the evidences he presents, from our personal observations we are prepared fully to indorse:

1. That, from the inherent relations of bromine, and the bromides, to the organic tissues and structures of the human body, their physiological and therapeutical effects must always be that of promoting destructive metamorphosis, or waste: first, of all matter below the normal dynamic condition; second, of tissue or structure of type or form foreign to the human body; and, lastly, of the normal tissues themselves.

2. That they are never indicated, therapeutically, except when there is matter or tissue in the body which it is desirable to eliminate from it.

3. That they possess neither inherited nor acquired anæsthetic properties, nor hypnotic effects, as chloroform, ether, opium, or cannabis indica, which act by retarding destructive metamorphosis; but may, by promoting destructive metamorphosis of retained effete matter, be followed indirectly by anæsthetic or hypnotic effects, in the same way as the evacuation of the bladder of retained urine by the catheter.

4. That they are contra-indicated where nutrition is much impaired, or the rate of tissue-waste more than natural, and where structural changes, or loss of form, by substituting tissue of lower for that of higher organization, have impaired the dynamic integrity of the nerve-masses, as in locomotor ataxy, insanity, spinal paresis, etc.

5. That they are only indicated where the organic processes of life are restrained or interfered with, by adventitious circumstances, to resume their normal working on the removal of the restraint.

6. That their effects on persons living luxuriously, and leading inactive or sedentary lives, and on all in whom tissue-metamorphosis is sluggishly performed, is to increase the rate of waste, and to compensate, to some extent, for the physical exercise necessary to maintain the normal velocity of tissue-waste or changes.

The Treatment of Croup. By FORDYCE BARKER, M.D., Clin. Prof. of Midwifery and Dis. of Women in Bellevue Hospital, etc., etc. Reprinted from Am. Jour. of Obstetrics and Dis. of Women and Children; with remarks by one of the Editors, A. JACOBI, M.D., Clin. Prof. of Dis. of Children in Coll. of Phys. and Surgeons, N. Y. New York: W. A. Townshend & Adams, Publishers.

The names of Professors Barker and Jacobi are well known to the profession, and we wish that both they and those that may follow them in the publication of monographs, would forego cumbering title pages with voluminous explanations of the *status*. Recently in the JOURNAL we noticed Dr. Lente's positive assurance that pseudo-membranous croup was utterly shorn of its terrors by teaspoonful doses of calomel [SEDATIVE!]. But Professors Barker and Jacobi, singularly enough, deem it necessary to say something more—hence this pamphlet. Attention is especially called to the diagnosis. Prof. Barker objects to the term "false croup," and cannot give his unqualified assent to the "spasmodic laryngitis," recognized by Prof. Jacobi and most of the authorities. He thinks "the difference between false and true croup is

essentially a question of intensity and extent of tissue involved, and there is no other radical difference between them," and that the terms false and true croup should be abandoned, as they convey a false impression. The croup of diphtheria he regards as an altogether distinct and specific disease.

Prof. B. relies almost wholly upon three or five grain doses, according to the age of the child, of turpeth mineral, repeated in fifteen minutes, unless vomiting occurs. So confident is he of its efficiency, that it is the only medicine which he has constantly carried in his pocket for twenty-eight years, and he has no doubt that at this moment a hundred families in New York city have three-grain powders of the turpeth mineral, carefully labeled "croup powders." He thinks the powders do no harm, and if he finds on the morning visit that the case proves to be one of laryngismus stridulus, he has only to seek for the cause of the reflex irritation, and remove it in the usual manner. Subsequent febrile symptoms he controls by measures of which veratrum viride is the central figure. The treatment recommended by Prof. Barker, like that of Dr. Lente, has the advantage of definiteness and simplicity. It would be exceedingly gratifying if the results proved as favorable in the hands of other practitioners as in those of the leading advocates.

The Third Annual Report of the Brainard Free Dispensary of the City of Chicago, for the year ending June 30, 1870. The Dispensary is located at the north-west corner of Jefferson and Randolph streets, in Rice & Jackson's Building.

This institution is supported by voluntary contributions, and under the management of its efficient corps of managers, surgeons and physicians, is rapidly proving a great public charity. $40 paid at once, or $10 annually, constitutes the donor a life member. $5 gives an annual membership. All persons interested in the welfare of the sick poor are cordially invited to visit the dispensary, and witness its practical workings. During the year ending June 1st, 1870, 3,036 different persons were treated at the dispensary; 2,687 visits were made at the homes of the sick; 987 vaccinations were performed.

We are gratified to notice that the Board of Supervisors of Cook county, recognizing the beneficial influence of the dispen-

sary, has appropriated $500 toward the current expenses of the year. The annual report contains a tabulated list of the diseases treated.

Woman's Medical College of the New York Infirmary, 128 Second Avenue. *Annual Catalogue and Announcement.*

This is a completely organized college, under the auspices of a large and influential board of trustees. The course of instruction as announced is complete and thorough, and the character of that instruction is guaranteed by the association of a board of examiners, consisting of Drs. Willard Parker, Isaac E. Taylor, Austin Flint, Stephen Smith, B. W. McReady, A. L. Loomis, and Samuel St. John.

If any of our fair friends are determined to undertake the essentially unfeminine business of practicing medicine, we most certainly recommend them first to thoroughly prepare themselves by attending this or some other as respectable college for women. They can get an announcement and all necessary information by addressing Dr. Emily Blackwell, Secretary of the Faculty, 128 Second Avenue, New York City.

Meanwhile, we warn them that the public do not want female practitioners who do not mingle some quackery with their craft. Astrology, in this city, takes better even than clairvoyance, and we have no doubt the same is true in New York.

A Medico-Legal Study of the Case of Daniel McFarland. By William A. Hammond, M.D., Prof. Diseases of the Mind, etc., etc. Read before the Medico-Legal Society of the City of New York, May 12th, 1870. New York: D. Appleton & Company. Pp. 35.

A curious tractate, which the high professional respect we have always entertained for its author, forbids us from further noticing.

New York State Inebriate Asylum. A Circular by the Superintendent, D. G. Dodge, M.D., Binghampton, N. Y.

Containing principles of management, mode of gaining admission, rules for patients, etc. Copies can probably be obtained by addressing the superintendent as above.

Steiger's Literarischer Monatsbericht. (*Literary Monthly Record.*) May, 1870. Pp. 72. 12mo. New York: E. Steiger.

Steiger's Monatsbericht, commenced May, 1869, the only literary periodical published in the German language in the United States, enters upon its second volume, the first number of which has just been issued. Among its interesting contents will be found an article on the distinguished historian, Friedrich Kapp, who has just returned to Europe after twenty years' sojourn in this country, and whose works, some of which have been translated, are widely known,—an inquiry, "Which is the first German book printed in America?"—The "Poppenhusen Institute" in College Point, an institution generously founded and endowed by a German, for the advancement of knowledge and the improvement of the moral and social condition of the working classes,—an account of the "Growth of the Book and News Trade in the United States," with special reference to H. H. Bancroft & Co. and Sinclair Tousey,—besides many minor notes connected with schools and other matters of value to all literary men. We notice also the prospectus of a list to be compiled of all who have written German books and pamphlets in the United States; but the most striking feature of the present number of the Literary Monthly Record, in our opinion, as it will be in that of its numerous readers, is the announcement of a prize of eight hundred dollars offered for the best historical sketch of the intellectual vigor and progress of the German population in North America, more particularly exhibiting the influence of the German-American press on the development of American institutions. Such an announcement is calculated to awaken curiosity, and stimulate the exertions of many students and professional writers. Further particulars, we doubt not, will be eagerly sought after; and they can be found in the periodical itself, which may be obtained free by addressing Steiger's Literarischer Monatsbericht, 22 and 24 Frankfort Street, New York. It should be added here that the publisher continues to send his Monatsbericht free and prepaid to all who wish to have it.

The Little Corporal Magazine. Chicago: Sewell & Miller.

The July number of this beautiful juvenile comes to us greatly enlarged and improved, as well as finely illustrated. The wonderful growth of this young Napoleon of the juveniles has been as surprising as it is interesting. Its circulation has shot far ahead of that of any of its competitors. Its matter is entirely original and of a very high order. The freshness and vivacity of its pages cause the eyes of all our young people to sparkle. In its new, improved form it is one of the handsomest, as it is the cheapest, magazines we have ever seen. Childlike but not child*ish*, it re-

joices the hearts of both parents and children alike. This number begins a new volume; now is a good time to subscribe. One dollar a year; sample copy 12 cents.

Editorial.

The American System.

Our vivacious contemporary, the New York *Medical Gazette*, takes seriously to heart the lecture read him about his naughty *facetiæ*, by the venerable Mentor of the late Editorial convention. Incontinently repenting, he labors forthwith to bring forth "fruits meet for repentance." But the difficulty with him is ingrained, and although we have sometimes been saddened by his voluntary facetiousness, we are oppressed by inextinguishable laughter at his temporary excursion into, for him, "fresh fields and pastures new" of oracular solemnities of discourse.

The *Gazette* says that "the medical press of Great Britain and France is unanimous in urging the immediate reform of schemes of medical education which there are already as far superior to ours as Hyperion to a Satyr." Not only this, but he would almost agree to maintain contented silence for the rest of his lifetime if he could see as high a point attained here as that from which our British brethren start in their measures for further reform.

The remedy proposed by our newly reformed facetious contemporary, is in duplicate—one or two voluntarily endowed colleges so as to be nearly or quite independent of fees, thus enabled to look for quality rather than quantity, and to make their preliminary requirements as strict as some of them would now if they could; when there shall be one standard of examinations irrespective of the teaching corporations. Our contemporary is kind enough to admit that: "We have in our single degree a simpler and better system than the British one with its several qualifications to be obtained from different sources, and its multiplicity of titles which confuse even their *professors*." (?)

The present writer and responsible Editor of this *Journal*, respectfully propounds the following opinions, not begotten of the hot fancies of youth, but the product of matured conviction after a quarter of a century's experience as a medical teacher and general observer of the *status* of the profession:

1. The AMERICAN SYSTEM is superior to the British, French, Prussian or Chinese systems.

2. The right answers to three questions are superior in merit to the *required* wrong answers to forty.

3. That the average American student will receive and comprehend the facts brought before him in the medical college lecture room, as well as the average British, French, Prussian or Chinese student.

4. That anatomy is as thoroughly taught in the majority of American medical colleges, as in any European or Chinese school.

5. That when Prof. Huxley lamented, in a recent speech, that Physiology was taught and received in British schools "as if it were a mere matter of books and hearsay," he might have extended the remark to embrace the entire body of their teaching, whereas in American schools (at least in Rush Medical College under the care of Prof. Freer) Physiology is taught in a way in every particular as demonstrative as anatomy, and its immediate bearings upon hygiene and therapeutics as definitely illustrated as the bearings of anatomy upon surgery.

6. That chemistry in like manner is as thoroughly taught in a score of American medical colleges as in the most vaunted schools of the old world.

7. That the same is true with regard to general therapeutics and materia medica, with the addition of a wholesome scepticism in regard to much of the latter, which the absurdly "conservative" notions of the transatlantic schools will in no wise permit.

8. That the true relations of the specialties to general practice are better understood, and each less exclusively relied upon in America than elsewhere in Christendom or China.

9. That so far as anything can be determined by statistics, the application of the elementary principles to the practice of the art shows a better result, whether in medical, surgical or obstetrical practice, than the European records can produce. Subordinate to

this statement we claim that the average graduate of the respectable American college will have a better chance of success in general practice, than his, average, imported competitor, however many Examining Boards have compelled him to answer absurd and unnecessary questions with equally foolish and obsolete forms of words.

10. The object of medical teaching is not merely to store the mind with facts, but to cultivate the capacity of students to think right on medical subjects. The method of Bacon is better than that of the mediæval schoolmen. Sound judgment is infinitely preferable to mere memory. The best medical teacher is not the one who can best cram his pupils with notions, but he who can elevate them to a high plane of medical thought. There are many learned men, but few wise. There are many whose only approach to wisdom is that they cry aloud in the streets (or medical conventions) and no man regards them.

11. There are two modes of competition between the medical colleges of this country, and the profession understand them. There is the competition of fees, and the competition of merit. The public do not understand the difference. Not one graduate in a hundred is asked where he got his diploma. The American cares little for parchments of any sort—he judges by results. If he finds an intelligent, clear-headed man he is quite apt to trust him even with his health and life. If the individual is dull and thick-headed, he will sooner try a homœopathist or a woman.

When the graduates of a college succeed, that college will have students whatever its fees, or whether its faculty make clamorous speeches in conventions or not. In America, at least, "nothing succeeds like success."

12. Sound opinions will secure their own adoption without incessant talking about them, and therefore we shall have no time to spare for further controversy on American Medical Education.

Underbidding.

At the late Medical Teachers' Convention, Prof. A. Hammer offered the following resolution, seconded by Prof. Moore:

Resolved, That the attempt on the part of any existing schools, to reduce their tuition fees, or of any new College to be started, to underbid its neighbors, shall be by this body considered and pronounced to be an act of dishonesty.

After some discussion, participated in by Professors Hammer, Murphy, and Davis, the mover, with the consent of the house, withdrew the resolution.

The "entangling alliances" so long sought by the "uneasy gentlemen," we take it, may now be considered as self-dissolved. It is generally understood that the failure to adopt the above resolution was secured by certain well known agitators who contemplated a grand *coup d'etat* for approximately "free medical education." The proposed *coup*, however, has been temporarily postponed, as it is believed the same result can be practically secured by donating, or discounting, the nominal fees in a sufficient number of cases to warrant continued publication of annual catalogues.

Meanwhile, we repeat, the men who most of all have clamored about medical reform, are the very ones who most of all personally need it. Their clamor is a feeble imitation of the "stop-thief" cry of the streets. The best method of acquiring respect is to be respectable, and the best method of elevating the standard of medical education is for each medical instructor to see to it that he himself acquires all possible knowledge of the subject which he is appointed to teach. This cannot be accomplished by society resolutions.

Muriatic Acid in Fever.

This is not a "new practice" or "German practice," as a correspondent surmises. It was employed by Prof. Nathan Smith as early as 1798. Of course it became more popular after having gone to Europe and returned. It is usually the case that the improvements which the active American mind develops are not received by the book manufacturers, or a certain class of flunkey devotees of transatlantic dotage, until they have passed the salt water at least twice. It is safe to say that the majority of approved methods of modern therapeutics are of American and not of European origin. It is time to frown down and laugh down the slavish deference to foreign *dicta*, both in modes of education and practice, which belittle many of our writers.

It is fair to state that Prof. Smith did not look upon the muriatic acid as in anywise a specific for typhus, but only as a subsidiary remedy, and in fact this is its appropriate position. All so-called

medicines in typhoid fevers are only curative in so far as they promote on the one hand elimination and on the other repair. We do not even except veratrum viride. Control of sundry symptoms is not by any necessity of the case curative action. That is homœopathic doctrine.

Editors' Convention.

Our acknowledgments are due for advance sheets of proceedings of the recent convention of several of the medical editors of the country. We receive with suitable humility the apostolic lecture on how to conduct a medical journal, and shall continue as heretofore to follow him, as of old time—

—dextræ se parvus Iülus
Implicuit, sequitur que patrem non passibus æquis.
——Ferimur per opaca locorum.

But, positively, as will be seen by consulting previous pages of this number of the *Journal*, the pressure of original matter is just now so great that we are lugubriously fain to treasure up, as best we may, its profound teachings and leave the lecture itself to that immortality it will most deservedly and certainly achieve without our insignificant assistance. "Can a man gild refined gold, etc., etc.?" It is our earnest prayer that the medical editors at the next convention may have an equally eloquent, instructive, persuasive and entertaining "feast of reason and flow of soul," all compact.

News and Gossip.

The distinguished surgeon, Prof. Syme, is dead.——Sir James Y. Simpson is to have a monument in Westminster Abbey.——Rokitanski has been elected President of the Imperial Academy of Sciences of Vienna.——Dr. J. L. Sullivan, of Mass., writes in defense of the American Medical Association, which is laudable, for *De mortuis nil*, etc.——One of our New York friends thinks one of the lamentable characteristics of American medical journalism is its "lack of independence—an almost childlike deference to traditional or self-constituted authorities—which, with few exceptions, is noticeable in our contemporaries." In a previous

article, he thinks he would be content with the British system of medical education.——Dr. Paul Schœppe, of poisoning notoriety, has been refused a writ of error in Pennsylvania. His only chance now seems to be to "swear the peace" against the hangman.——Prof. Gross is not in favor of women as medical practitioners. President Stille favors petticoated medicine. Quite a wrangle was *gendered* in the Pennsylvania State Medical Society on this topic.——The *Nashville Medical Journal* comes to us in a new and neat dress, on which we congratulate it. Dr. Bowling is relieved from the cares and losses of publication, and thereanent, without the fear of the apostle before his eyes, he expresses himself facetiously. Drs. Nichol, Eve and Briggs have been added to the editorial force—Dr. W. Nichol being the managing editor. Whoever felicitates himself that Prof. Bowling has laid down his spear, we opine, however, would find himself mistaken, on occasion.——Dr. Peter, of Paris, prefers, in all cases, the Tinct. Iodinii, as a vesicant, to the cantharides.——It has been shown by M. Burral, before the Academy of Sciences at Paris, that rain water contains a notable quantity of phosphoric acid. By drinking 440 gallons of rain water, a man will imbibe from 13 to 15 grains of phosphorus; good news for the hydro- and homœopathists.——Large doses, internally, of crystallized carbolic acid are commended in variola at Paris. Better than this, the decrease of dyspepsia in that city is said to be attributable to the largely increased consumption of apples. One hundred millions of apples are digested in Paris every winter. This is probably the reason why it is written: "By their fruits ye shall know them," dyspepsia notably begetting bad temper.——Currents of electricity passed through the throat will often relieve severe hoarseness, at least temporarily. Hereafter, opera houses are to be furnished with a battery behind the scenes.——Dr. Lisle thinks arsenious acid will cure two-thirds of apparently hopeless cases of insanity. We think it will stop it in all cases, if the doses are large enough.——Dr. Thorne says permanganate of potash is *the* thing for oxaluria. He gives a teaspoonful three times a day of a solution containing four grains to the ounce of water.——Which reminds us that our friend Dr. Paoli thinks highly of this remedy in the treatment of rheumatism—so highly indeed, that he long since promised us an article on the subject.——Dr. Stivers, of San Francisco, eulogizes hydrate of chloral in full doses in delirium tremens, and Prof. Hammond, of New York, has favorable impressions from its employment in chorea. None of our correspondents as yet quote its employment in child-birth.——The *Indiana Med. Jour.* seems to regret that the Am. Med. Association failed to provide for compelling life insurance companies to pay their examiners the five dollar fees. Will the exponents of the Association tell us, "Why this is thus"?——Dr. Reynolds read a

paper before the British Med. Association, highly recommending (in the usual terms, which see,) tincture of the perchloride of iron in rheumatic fever. No limitations as to the period of the disease. ——In the State of Michigan, clergymen and physicians live to 59 years, shoemakers 55½, and farmers 51 years. Dry goods clerks, however, measure off only 33.14 years.——Egyptian mummies are now regularly shipped to England for conversion into manure. The Pharaohs are said to be excellent fertilizers.—— Dr. Tom O. Edwards, of Lancaster, Ohio, well known to the majority of our readers, reports in the *Bost. Jour. of the Gyn. Society*, a case of removal of a horse-shoe pessary from the bladder of a woman, where it had been introduced by a womb doctor, to relieve *prolapsus uteri.* This beats Prof. Chapman's case, where the student could not tell the same organs from a cart wheel. The womb doctor's explanation of the case was this: "I must have put one leg in the urethra, and as I reached for grease to anoint my fingers, the bladder must have sucked it in." Dr. T. O. E. fails to see the point of the explanation, but there must be one somewhere, as this makes four cases recorded of similar mal-introductions. We are obliged to add our own opinion, that in nine cases out of ten, when used, the horse-shoe or any other pessaries are as much out of place in the vagina, as in the bladder or œsophagus. In the great majority of cases which present themselves in private practice, we either advise, or, personally, dislodge the instruments, and toss them into the stove. — In the same *Journal* Dr. Jackson calls attention to the remarkable aphrodisiac powers of the *Helonias Dioica* or [false] unicorn root. He employs it in the dose of a dram of the powdered root three times a day. Dr. J. found this remedy capable of removing oxalate of lime from the urine in cases of that diathesis. Its use is suggested in loss of tone of the cremaster muscle, varicocele, relaxed vaginal parietes, etc. This article was first permanently brought to the notice of the profession by Dr. Braman of Brighton (Bost. M. & S. Journal, v. XL., p. 416) in 1849. Prof. Charles A. Lee subsequently eulogized it—the eclectics rejoiced in it, and now the *Chic. Med. Jour.* pats its head and dismisses it for its travels, through the press and people, for its nine days' new lease of life.——"The *country members*," a medical review of that excellent little book, *A Physician's Problem*, thinks, should have had the benefit of translations of the frequent quotations in Latin, French and other languages. We will wager a copy of Wood's Pocket Medical Lexicon, that that reviewer has never lived in the country, and knows nothing of the class of men he impliedly sneers at. Let us inform him that in this country the rural practitioners, as a body, surpass their city brethren in both general and professional knowledge. In the country, and particularly in small villages of a few thousand inhabitants, a man's real qualifications are scrutinized

with a closeness and sharpness impossible in the city. If a doctor wishes to conceal his ignorance, let him go to the larger cities where *deportment* will answer his turn with the flimsiest possible acquaintance with his business. But unless thoroughly *posted*, let him beware of the town of from 2,500 to 10,000 inhabitants. He must run the gauntlet of the Committee of the Whole, ready to resolve themselves into a Committee of Safety. Men will not be wanting, apparently plain men, who will see "through and through" him. In the great city, nobody has time for his analysis, unless he foolishly invokes it by presumption.

Medical Witnesses.

A medical witness would do well to remember, 1st, That no one has a *right*, as the law now stands, to ask an *opinion* of him; 2d, That, if asked for an opinion, he may refuse to give it; and 3d, That, in order to throw doubt on his testimony, the opposing counsel will, at times, endeavor to entrap him into the expression of an opinion, and afterwards, by subsequent questions, to lead him to absurd conclusions, whereby his testimony, although strictly accurate, may be made to appear wrong in the eyes of the jury. 4th. In the statement of facts, it would be well to be as brief as is consistent with clearness. Moreover, the witness should, as far as possible, avoid all technical language. For example, a witness, when about to instruct a jury, will lose credit for clearness of statement, and may darken the mind of the whole court, by telling of the *scapula* instead of the shoulder-blade, or using *clavicle* for collar-bone, *sternum* for breast-bone, etc. 5th. If he be not sure that he is really an expert in the matter in hand, he should beware of going upon the stand at all. If he do so, he deserves, and probably will get, a severe castigation from opposite counsel, and he has no right to ask sympathy from his professional associates. He cannot blame lawyers for even apparent rudeness in their attempts to prove him, before the jury, to be the ignoramus he really is. 6th. Some, while on the stand, seem to forget the great difference there is between the statement of a fact, or of a series of facts, and the inferences that may be made from these facts. The facts should be given, the inferences may be left to the wisdom of the court or jury to make. If the witness makes them, he does so at the risk of severe criticism.—*Boston Med. Jour.*

First Meeting of the North-Eastern Indiana Medical Soc.

Pursuant to a call for the purpose of organizing a Medical Society to embrace the counties of LaGrange, Steuben, Noble and DeKalb, the following named physicians met on Wednesday, June 15th, at the parlor of the Tremont House, Kendallville, Ind.:

Drs. Denny, Carr, Crum, Palmiter, Randall, Landon, Ligonier; Franks, Adair, Brimfield; Fansler, Rome City; Ward, Wawaka; Denny, Hawpatch; Wood, Angola; Dancer, South Milford; Wright, Avilla; Vincent, Abell, Williams, Gilbert, Kendallville.

After reading the minutes of the preliminary meeting held May 20th, 1870, the committee on permanent organization, consisting of Drs. Denny, Franks, and Palmiter, reported the following officers, who were promptly elected:

President—O. J. Vincent. Vice-Presidents—Wood, Dancer, Stough, Palmiter. Secretary—J. L. Gilbert. Corresponding Secretary—D. W. Crum. Treasurer, L. F. Abell. Censors—Drs. Carr, Williams, Franks, Denny and Landon.

On motion, the Chair appointed Drs. Denny, Wood and Crum to prepare a Constitution and By-Laws.

They reported immediately, and a Constitution and By-Laws were adopted, of which the Secretary was ordered to have one hundred copies printed. A fee-bill was then adopted, and two hundred copies ordered to be printed in card form.

The following resolutions were adopted and ordered to be published in the papers of the counties of Steuben, LaGrange, DeKalb and Noble:

Resolved, That all who dishonestly or maliciously refuse to pay their doctor bills be reported to this society.

Resolved, That no member of this society shall furnish medical aid, except in extreme cases, to persons thus reported, until they have paid their former doctor bills, unless they pay a double fee in advance.

Resolved, That the honest poor are always the proper subjects for our sympathy.

The code of ethics of the American Medical Association was adopted. On motion, Drs. Landon and Wood were requested to prepare essays to be read at the next meeting.

Scarlatina and Diphtheria were selected as subjects for discussion at the next meeting.

On motion, the Secretary was ordered to publish the proceedings of this meeting in the journals of the four counties named above, and in the medical journals of Chicago and Cincinnati.

The society then adjourned, to meet at Waterloo, on the first Tuesday of September next. O. J. Vincent, *Pres.*

J. L. Gilbert, *Sec.*

American Pharmaceutical Association. Notice of Annual Meeting.

The 18th Annual Meeting of the American Pharmaceutical Association will be held in the city of Baltimore, on the second Tuesday (the 13th day) of September, 1870, commencing at 3 o'clock, P. M. The place of meeting and the arrangements for the accommodation of those who attend, will

be announced by the local Secretary. It is expected that the several standing and special committees will be prepared with full and highly instructive reports on the many important subjects which should engage our earnest attention at this time.

The central position of Baltimore will afford opportunity for many to be present at this meeting who have not usually met with us. A full attendance of the members is earnestly desired, as, among the important business to be brought forward, will be the revision of the constitution more particularly in reference to improving the financial status of the Association.

Pharmacists and druggists eligible to membership are earnestly invited to forward or to present their names for election and thereby aid in extending the usefulness of this Association. Those desiring to join can obtain the necessary blank applications from the chairman of the Executive Committee, Thomas S. Wiegaud, 528 Arch street, or from the permanent Secretary, John M. Maisch, 1607 Ridge avenue, Philadelphia. A cordial invitation is extended to all engaged in manufactures in any way connected with Pharmacy or Chemistry, to send specimens of their productions for exhibition during the session. These may be sent to Prof. J. Faris Moore, local Secretary, Baltimore, accompanied with an invoice and a full description of the articles sent. E. H. SARGENT, *President.*

Chicago, July 1, 1870.

Obituary.

J. S. HILDRETH, M.D., formerly Superintendent of the Dessuarres Eye and Ear Hospital, occupying the Cook County Hospital building in this city during the war, and recently engaged in the practice of that specialty at his residence, 526 Wabash avenue, died suddenly July 22. It is understood that he had been suffering severely from neuralgia, and that his death was due to an overdose, accidentally taken, of some powerful narcotic. Dr. H. was the son-in-law of the Hon. Jacob M. Howard, of Detroit, one of the U. S. senators from Michigan. His associates on the medical staff of Cook County Hospital adopted the following resolutions:

Whereas, We have just learned of the sudden death of our friend and associate, J. S. Hildreth, M.D.; therefore

Resolved, That in the death of Dr. Hildreth the medical board has lost one of its most worthy and industrious members, the profession of our city one of its brightest ornaments, and society a gentleman of high culture and excellent social qualifications.

Resolved, That in common with the entire profession, we tender to his afflicted family the assurance of our high respect for the deceased, and our heartfelt sympathy for them in this their irreparable loss.

Resolved, That the board attend the funeral in a body, and ask permission to render upon that occasion such services as the family may designate.

Resolved, That a copy of these resolutions be sent to each of the daily papers of this city, and to the medical journals for publication; a copy transmitted to the family of the deceased, and also that a copy be preserved in the archives of this hospital.

THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery, and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.; AND WALTER HAY, M.D.

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Original Communications.

ARTICLE I.—*Uterine Fibroid of the Posterior Wall Successfully Removed.* By A. REEVES JACKSON, M.D., Chicago, Ill.

Mary Ann E., the subject of the following case, aged twenty-four years, unmarried, applied Sept. 10, 1869. With the exception of some unimportant dyspeptic symptoms, which appeared two years ago, her health had always been good until within the past seven months. In February last she observed that the menstrual discharge, which had commenced at the age of fourteen, and had always been regular and painless, was more profuse and of longer continuance than ever before. With each succeeding period this symptom of excess became more marked, so that latterly the flow continued about two weeks, being abundant throughout, and followed by an interval of equal length of time during which the patient had leucorrhœa. Under this drain she became greatly anemic, and her health rapidly declined—this being more especially observable during the past four or five weeks. Two months ago—early in the month of July—she became conscious of an

enlargement of the lower part of the abdomen, and, as about the same time she commenced suffering from symptoms of irritable bladder, she attributed her increased size to disease of that organ. Locomotion had at no time been interfered with; indeed, as far as her failing powers would permit, she had continued to assist in ordinary household duties. The bowels were habitually constipated, and the appetite greatly impaired.

An external examination of the abdomen revealed the presence of a tumor occupying the epigastric region—freely movable from side to side, hard, globular, smooth, and about the size of the gravid uterus at the fifth month. By the touch, combined with external palpation, the cervix uteri was found to be of normal density, somewhat enlarged and low down in the pelvis; the os uteri was circular, well-defined and sufficiently patulous to admit the extreme tip of the finger. The upper part of the pelvic cavity was occupied by a hard, smooth, inelastic body. With some difficulty I introduced a probe to the depth of four inches into the cavity of the uterus, which was then found to move consentaneously with the tumor. The sound passed in front of the latter and was distinctly perceptible through the abdominal and uterine walls. A flexible male catheter was subsequently introduced as far as seven and a half inches. A fibrous tumor of the womb having been diagnosed, its removal, if practicable, was decided upon. Proceedings for this purpose were accordingly commenced Sept. 13th.

A sponge tent was introduced into the cavity of the cervix, and allowed to remain twenty-four hours. On its removal I was enabled to insert the index finger a little beyond the first joint, but could not reach the tumor. A second and larger tent was therefore introduced and permitted to remain twelve hours. This was withdrawn on the morning of the 15th, at which time the cervical canal was found so well dilated that the finger readily penetrated the os internum, from just above which point I could distinctly feel the tumor starting from the posterior wall with which it was intimately blended. A hand applied at the same time to the abdomen, and a finger subsequently inserted into the rectum, enabled me to gain a very clear idea of its size, shape, position, and degree of mobility.

Menstruation having occurred on the evening of the 15th, all treatment of a local character was suspended until Oct. 2nd.

On the morning of that day the cervix was exposed by means of a Sim's speculum, and the anterior lip having been fixed by the insertion of a tenaculum, the lateral walls of the cervix were cut through quite up to their vaginal attachments. The operation was attended by some hæmorrhage, which soon ceased. A medium sized trocar, its point guided by the finger, was then pushed directly into the substance of the tumor, the direction given to the instrument being upwards and forwards. This operation was painless and almost bloodless, only a few drops following the withdrawal of the instrument. The patient was now ordered to take 10 gr. Pulv. Ergotæ every two hours.

Oct. 3rd. 7 P. M. Has had pain during the day. The cervix uteri is quite soft, and is enlarging above the incision. Dr. Isaac Ott is kind enough to see the case with me, and with his assistance I push the trocar into the lower part of the tumor about two inches, giving to the instrument a different direction from that of yesterday. To continue the Ergot.

Oct. 4th. 10 A. M. The Ergot has produced so much nausea that I am obliged to order its discontinuance. The os uteri has not changed since yesterday.

7 P. M. There has been during the day a little discharge of a grayish substance, thin and bloody.

Oct. 5th. This morning I introduce a bistoury carried flatwise against two fingers through the internal os uteri, and make an incision into the capsule of the tumor about two inches long and an inch deep. A considerable gush of blood follows the operation, but it soon ceases.

Oct. 6th. There has been some oozing of blood since the operation of yesterday, accompanied by the peculiar gray discharge previously mentioned. The os and cervix are but little changed, although the lower part of the tumor is evidently softening.

Oct. 7th. Incise the capsule of the tumor again to-day, making a cut about three inches long and an inch in depth, the operation being followed by a copious discharge of blood which ceases in a few minutes.

Oct. 8th. To-day I introduce a small uterine gauge through

the os internum, and, engaging it in the incisions previously made, lacerate the substance of the tumor in various directions.

Oct. 9th. The patient has had much pain during the night and this morning, and has no appetite; tongue coated; pulse 104; tenderness in hypogastric region. The lower portion of the tumor is now quite soft, and there is present an almost constant discharge of grayish matter mixed with blood. Conclude to suspend further operative measures for the present, under the impression that the natural powers will now be sufficient to cast off the growth. In the meantime order the adoption of such tonic and dietetic means as will be most likely to sustain the patient through the ordeal. As the discharge is very offensive the utmost attention to cleanliness is enjoined, and the patient advised to syringe the vagina three or four times a day with a solution of permanganate of potash.

Oct. 15th. The general condition of the patient has much improved. Her appetite is better; tongue clean; pulse 90, soft and full. The bloody grayish discharge continues, and has been daily growing more abundant. The os uteri is open to the size of a silver half-dollar, and is filled with a soft decomposing mass.

Oct. 20th. To-day portions of the softened tumor commence passing away. The patient complains of pain, and the discharge is very abundant and very offensive.

Oct. 21st. Succeed to-day in removing a large portion of the tumor by means of the fingers. Shreds and small masses with copious fluid discharge, all highly offensive, are continually passing off. The general health of the patient is failing. She has no appetite; indeed, expresses the greatest loathing for food. Her pulse is now 120, small, quick and sharp; tongue dry and brown. Still she is not despondent, and has the most sanguine hopes of a favorable issue. Order beef-essence and milk-punch, cleanliness, disinfectants, and free ventilation of her apartments.* Deeming it important to hasten the discharge of the remainder of the mass, I order to be given a teaspoonful of fluid extract Ergot

* This patient, in common with many others that I have seen, could not abide the use of *Carbolic Acid*, for the reason—in which I fully coincide—that its odor is vastly more unpleasant and unenduring than most of those which it is *used to mask and neutralize.*

every two hours, with the view of completing its detachment from the uterine walls.

Oct. 22nd. Am summoned at a very early hour this morning to see my patient (six miles distant) whom I find suffering intense pain, the effect, doubtless, of the action of the Ergot. Find on examination a large portion of the tumor protruding through the os uteri, and at once remove it by means of the fingers. Its texture is now so soft, however, that it gives way on the application of the least force, and after making several vain attempts to pass the fingers above it and thus scoop it away, I am reluctantly compelled to defer the removal of the remainder until I can provide myself with more adequate instruments. Discontinue the Ergot, and give a full dose of Morph. Sulph.

4 P. M. She feels easier. Find another portion of the tumor filling the widely dilated os uteri. Remove as much of it as possible by means of the fingers, and then, by means of the placenta forceps, aided by the finger, I succeed in removing the balance of the growth—a mass somewhat larger than a hen's egg.

From this time onward the patient improved steadily. The discharge of small shreds, together with the characteristic grayish sanies, continued more than a week, diminishing in quantity, however, day by day. Her general condition became rapidly better. On the 24th of November—one month subsequent to my last visit—she reported herself at my office entirely well. The womb had nearly regained its normal size, and the last menstrual period had occupied but four days. Her appetite was excellent; the red color was returning to her lips and cheeks, and she had gained twelve pounds in weight.

Remarks. Not many years have elapsed since it was the common belief that uterine tumors, such as the foregoing, were unamenable to surgical treatment. Indeed, even now, when the results of the numerous operations by Atlee, of Philadelphia, Baker Brown and other idol-breakers are before us, many surgeons not otherwise especially conservative are disposed to regard recoveries after such operations rather in the light of escapes from imposed peril than legitimate results of scientific surgery. Pedunculated growths, it is admitted, are quite proper subjects for removal; but those of an interstitial character and those having

sessile attachments, although of precisely the same nature, productive of the same symptoms, as effectual in causing hæmorrhage and destroying health, must be let alone—for it almost amounts to that—to do their work of killing, and why? The reasons assigned for this non-interference are threefold. We are told that

1. Fibroid tumors of the uterus are frequently multiple, and although the prominent one may be removed, the reasonable effect of the operation will be to excite activity and rapid growth in the others; hence, the patient will not be permanently benefitted.

2. The operation is a hazardous one, and may in a few hours or a few days deprive a patient of life which might otherwise be protracted for years.

3. Tumors of this class have occasionally been known to disappear after the menapause, or even before, by a spontaneous process of absorption, inflammation or calcification.

With regard to the first of these statements it seems only necessary to say that, granting its entire correctness, the fact admitted affords no good reason why we should abstain from operating in any case where it is otherwise proper to do so. Surely it would be an anomaly in surgical practice to decline removing a portion of necrosed bone for the reason that the disease might subsequently involve another portion of the same bone. And what surgeon would consider himself justified in refusing to cut down upon and tie a bleeding artery, or to operate for stone in the bladder, because in the one case there might be secondary hæmorrhage, and in the other a recurrence of calculous disease? Yet it seems to me that the cases are so nearly parallel that, in order to be consistent, those who advocate and practice operative measures in these latter classes, cannot advise the withholding of them in those in question.

Besides, although it is true that in some instances there are more than one fibrous tumor present in the same womb, yet the rule undoubtedly is that they are solitary; and the cases of recurrence after removal are far too few in number to enable any one to say that such a contingency should be the slightest bar to operation.

That the operation for the removal of interstitial or sessile uterine fibroids, whatever may be the mode adopted, is exceedingly

dangerous, I am quite free to admit. But the knowledge of this fact should do no more than admonish us to exhaust other means that have been recommended and used for the purpose of checking the growth, controlling the hæmorrhage and relieving the pain and other local effects of the neoplasm, *provided it is safe to do so*, before resorting to it. It should not in any case be a reason for declining to operate. So long as the tumor is quiescent or of slow growth, and the hæmorrhages resulting from its presence are slight or so far controllable as to enable us to prevent them from producing dangerous exhaustion, just so long is an operation for its removal safely and therefore properly abstained from. But when this is not the case—when repeated hæmorrhages and pain have so exhausted the patient as to jeopard her life,—and when, as is commonly the case where the growths have attained any great size, the assiduous use of proper means have failed to relieve —then I hold that the surgeon is as much bound to operate as he is to perform craniotomy or the Cæsarian section in certain cases of deformed pelvis, having regard wholly to the end in view and not to the possible danger of the means used.

In the case of Miss E. the course here designated was not pursued. There was no delay whatever. When the nature of the disease was ascertained, and its usual course and the probable effect of remedies pointed out to her, she at once elected to have radical measures resorted to, preferring to assume the risks of the operation with the prospect of cure, to the certainty of many months or years of invalidism with the probable necessity before her of a final resort to an operation under more unfavorable conditions. This determination receiving the sanction of her friends the question was settled.

It is generally conceded that the various remedies that have been advised for the purpose of producing absorption of these morbid growths, are at least unreliable, if not indeed useless. Thomas (*Diseases of Women*, p. 421,) says, "Tumors have in certain instances been known to disappear while drugs have been employed, and perhaps they did so in consequence of their use. But no such effect can be looked for with any confidence. Indeed, with our present experience, such a result must be regarded as decidedly exceptional." Scanzoni says, "We do not remember a single case in which, with the means indicated, we have obtained

the complete cure of a fibrous body." And so say all those who have given attention to the subject. Each writer, while expressing his want of faith in the efficacy of Iodine, Iodide and Bromide of Potassium, Mercury, Muriate of Ammonia, etc., yet recommends their use. And such advice and such practice are proper enough, I repeat, so long as it is safe to temporize with the patient, because each experimenter usually desires to ascertain for himself the usefulness or uselessness of a remedy. For this reason, and because, also, some observers have thought they found much benefit follow their employment, trial may be given of any of the articles enumerated above for weeks or months together unless urgent symptoms—hæmorrhage more especially—make manifest to us that further delay is dangerous.

A favorite remedy with Dr. Atlee in these cases is the Muriate of Ammonia in doses of 10 gr. three times daily. I can bear testimony to its apparent efficacy in one case in which, by the advice of that gentleman, I used it in conjunction with the external use of Iodine.

The patient, a married lady, aged 45, had never borne children. Had menorrhagia the last three years. During the past year had seldom been free from a dark bloody discharge, sometimes watery and unusually offensive. A well-defined tumor occupied the whole of the right hypochondriac region, extending from the crest of the ilium to an inch and a half above the umbilicus. It was irregularly globular, hard, nodulated, and movable. The sound, passed through a small circular contracted os, entered the uterine cavity to the depth of four and a half inches, and motion then applied to the growth was distinctly transmitted to the instrument, and *vice versa*. Dr. Atlee saw the case in consultation, and diagnosed fibrous tumor of the uterus. The treatment consisted in the administration of Ammon. Murias. gr. x, three times a day, and the daily application externally of the Ungt. Iodini Comp. This treatment was persevered in more than a year, during which time the hæmorrhages ceased entirely, the patient regained her general health, and there was a very sensible diminution in the size of the tumor. Treatment was discontinued in the Spring of 1864, and the patient continued well until within a few months. Quite recently I learned that the tumor had again enlarged and that hæmorrhage had reappeared. Since that time I have made

use of the remedy in a number of other cases of the same character, but without being able to perceive that it exerted any influence in controlling any of the symptoms.

Mr. T. Spencer Wells thinks that the use of the Chloride of Calcium has a tendency to produce a condition of atheroma or calcification in the nutrient vessels of these growths, and that thus the size of these latter may possibly be lessened, or at least that their presence may be made innocuous. I have never made use of the remedy, and cannot therefore speak of its merits from personal experience, but coming to us, as it does, with the indorsement of such high authority, it is deserving of consideration and trial.

No. 1026 Wabash Ave.

ARTICLE II.—*A Statistical Report of Diseases of the Ear.* By E. L. HOLMES, M.D., Professor of Ophthalmology and Otology, Rush Medical College, Surgeon to Chicago Charitable Eye and Ear Infirmary.

(Read before the State Medical Society, at Dixon, May, 1870.)

The treatment of diseases of the ear, as also of the eye, has fallen, almost entirely, into the hands of specialists, wherever patients can obtain their services.

The chief cause of this is undoubtedly found in the fact that physicians seldom become interested either in the study or treatment of these diseases.

So far is this true, that scarcely a single man of eminence, as far as I know, in Europe or America, engaged in general medical and surgical practice, is willing to express a decided opinion in severe or obscure cases of diseases of the eye or ear.

Ophthalmology and Otology have, therefore, almost from necessity, become emphatically special departments of medicine and surgery.

I have, at previous meetings of this society, expressed my opinions as to what extent the oculist should be a thoroughly educated physician; and to what extent general practitioners, not residing in large towns, should comprehend the theory and practice of ophthalmic medicine.

What I have said regarding ophthalmology may be said, I believe, regarding aural science. The physician upon whom alone a community can depend for aid and council in disease, should be able to give relief in a large proportion of acute cases of aural disease.

Although certain classes of aural diseases are exceedingly obscure, there are many others which require comparatively little study and clinical experience to enable the practitioner to render inestimable service to his patients. There is no excuse for ignorance of this class of cases, in the general practitioner.

As compared with the literature of ophthalmology, that of otology is exceedingly limited. Hence there is less excuse, if possible, for the practitioner in neglecting the simple and practical portions of this department.

The number of persons in every community affected with diseases of the ear is by no means small. I think it is well established, that of the aggregate number of patients requiring medical aid, about one-twelfth suffer from some disease of the eye. The reports of different infirmaries present a variable proportion of cases of ear diseases. I think, however, that the average proportion of patients with aural diseases is about one-fifth of the number of patients with diseases of the eye.

In my own experience during fourteen years in private and hospital practice, the aggregate number of eye cases has been 8,982; of ear cases, 1,735. Of this number 1,076 were treated in private and 659 in dispensary practice. I have observed that relatively a less number of indigent patients were affected with diseases of the ear than of the eye.

In the following table the cases are arranged in accordance with the diagnosis, recorded in my daily journal. The modern system of classification is somewhat different from that adopted by some authors a few years ago. In a very large number of instances the cases were recorded without true scientific classification, as, for example, in cases of very long duration, where the chief objective symptoms were found to be otorrhœa and perforated membrana tympani, with more or less excoriation of the external meatus; for example, also, cases of very long duration in which there was found to be simply perforation without otorrhœa.

I have never observed a single case in which I was confident

symptoms of inflammation were confined to the membrana tympani alone, independent of disease of the middle ear or external meatus.

TABLE OF DISEASES OF THE EAR.

Perforation of Memb. Tympani—Otorrhœa,	321
" " " without Otorrhœa,	17
Polypus Auris,	27
Chronic Inflammation—External Meatus,	71
Acute Inflammation, External Meatus and Memb. Tympani,	42
Furuncle of External Meatus,	31
Caries of External Meatus,	2
Accumulation of Cerumen,	143
Exostosis of External Meatus,	2
Foreign Bodies in External Meatus,	17
Burn of Auricle and External Meatus, (lime, melted iron, etc.)	8
Eczema of Auricle and External Meatus,	31
Tumor of Auricle,	4
Frost Bite of Auricle,	3
Injury of Auricle,	7
Ecchymosis of Auricle,	3
Congenital Deficiency of Auricle and External Meatus,	3
Mastoid Abscess,	4
Caries of Mastoid Process,	2
Maniere's Disease (?),	2
Chronic Inflammation, Middle Ear,	796
Acute " " "	57
" " " " and Labyrinth—death,	2
Abnormal Acuteness of Hearing,	1
Tinnitus, (no apparent cause),	3
Deaf Mutes,	38
Total Deafness, (Disease of Labyrinth—Auditory Nerve,)	23
Deafness, (Syphilitic Disease,)	3
Calcareous Deposits in Memb. Tympani,	3
Unclassified,	68
Total,	1,735

ARTICLE III.—*Hydrate of Chloral.* By JAS. C. BASCOM, M.D., McLean, Ill.

For the last four months I have been using Hydrate of Chloral in my practice, and in nearly every instance with success. The indication for its use has been, with me, when Opium was indicated: The dose has been varied, according to the circumstances, the amount of pain, the character of the pain, etc. In common nervous headache, 10 grs. have almost invariably procured calm, natural sleep in ten to twenty minutes, lasting from one hour to all night—patient waking refreshed and well. In neuralgia, from 20 to 40 grs., in 10-gr. doses, every half-hour or hour, until sleep was produced. In severe cases of neuralgic rheumatism, gout, or inflammatory rheumatism, requiring from 20 to 40 grs. to procure a night's rest. In hysteria, 30 grs., to arrest the paroxysm and procure sleep. In delirium tremens, 2 drachms before sleep was induced. Acts finely in chorea, in all manner of nervous and spasmodic diseases, also whenever desirable to relieve pain of whatever character, I have used it, and generally with good results, and in no instance with any serious evils. When given in very large doses, protracted sleep was the result, and for two or three days a dull, drowsy sensation, but, with its effects, all untoward symptoms passed off. In one instance, I gave 10 grs. to a woman in the second stage of labor, a primapara, pains very frequent, os rigid, woman restless and very much fatigued; the effect was to procure twenty minutes quiet sleep, at which time the pains began to recur lightly, and in one hour were stronger than before. I thought I lost an hour, but *perhaps* saved the woman from convulsions. From my experience with Chloral, I consider it a very great acquisition to our list of remedial agents.

Original Translations.

ARTICLE I.—*Experimental Physiology.* Experimental Investigations relative to the Directions of Rotary Movements due to Unilateral Encephalic Lesions. By Dr. J. L. PREVOST, Member of the Biological Society.

[Continued from the August Number, 1870.]

The two ocular globes being turned habitually from the right side, the two sclerotics being apparent from the left side of the animal, although the dog could carry his two eyes to the left but with less power than to the right, there were slight nystagmic movements in the two eyes.

The right pupil was more dilated than the left, but they were both contractile under the influence of light, and they were both equally dilated by a solution of atropine.

When food was presented to the animal and placed at his left he did not see it; when, on the contrary, placed at his right he saw it readily and seized it. I, at first, suspected hemiopia; but after repeated examination of both eyes, became convinced that he saw well with the right eye, and that vision was, on the contrary, abolished in the left. Indeed, by closing the right eye of the animal and threatening the left with the finger, no reflex movements were induced so long as neither the cornea nor the lid were touched. The same experiment tried upon the right side resulted differently, and the dog winked at the slightest movement of the finger which threatened him. By an ophthalmoscopic examination I discovered no lesion of the left eye, the appearance of the bottom of the eye was similar on both sides. The dog has continued a rotary movement from left to right; but he does not execute it constantly, when he wishes to walk, as in the first days. When the animal has a strong desire to direct his steps toward an object, as when food is placed at a certain distance from him, he advances straight toward it, when, without any apparent cause for the phenomenon, he executes a rotary movement from left to right, sometimes several, resumes his direct advance, then frequently again performs the same evolution once or twice before

reaching the object; sometimes, on the contrary, he reaches it directly.

When the animal is left to himself in the apartment, and walks without any direct object, he turns almost constantly, spirally, (en manége) from left to right. When he eats, and when he is placed before the vessel which contains his food, he executes from time to time spiral turns, always in the same direction.

When a morsel of food is placed very near the left side of his muzzle, in place of turning his muzzle slightly to the left to seize the prey, he prefers to execute a spiral movement to seize the food as he meets it in the course of the movement. This tendency to rotary movement to the right is very manifest when by causing the dog to follow one, he is made to pass circularly around the room. When the circuit or grand spiral is made from left to right the animal has no difficulty in following it, however he finds himself compelled to execute from time to time what horsemen would term a turn to the right, then he continues upon the grand spiral. It is only with the greatest difficulty that the animal traverses a great circle from right to left, around the apartment; he increases the frequency of his turns, or springs to the right, and he can rarely accomplish the circuit of the apartment.

This involuntary impulsion into the rotary movement, from left to right, becomes still more remarkable when the animal attempts to go up or down stairs; he advances at first directly, ascends several steps, then hesitates, apparently resisting an invincible force which compels him to execute his spring to the right; he sometimes resists but often yields; he acts then cautiously, in order not to roll down stairs, which sometimes happens to him; often he groans and manifests his impatience at being obliged to yield to the impulse which forces him to turn.

It is not the loss of the left eye which directs the animal; for the same phenomena are produced when the right eye is closed, or even when a handkerchief is placed covering the two eyes.

These symptoms continued up to the day when the animal was killed; however, during the latter part of the time the tendency to rotation seemed to have slightly diminished, and the dog in advancing directly executed the spiral movements less frequently.

I had the opportunity to observe this dog for a long time, and to determine on several occasions the interesting phenomena which

I have deemed it my duty to give in detail, as possessing much importance, in regard to the theory of rotary movements. I have demonstrated them to the members of the Biological Society, before which I exhibited this dog at two different epochs, before and after his complete cure, and I moreover exhibited to the Biological Society the cerebral lesions found after his death.

This dog was killed the 18th of January, 1867.

Necropsy. Nothing in the meninges, except a slight circumscribed adhesion of the dura-mater to the right hemisphere at the seat of the wound of the brain.

Right hemisphere. A little triangular wound was observed situated upon the sphenoidal lobe, at the anterior margin of the fourth convolution, counting from the interhemispheric fissure, and upon the portion of this convolution which extends anteriorly beyond the third convolution, which is shorter than the fourth. In penetrating deeply, the instrument passed the inferior portion of the right corpus striatum, leaving the optic thalamus on its inner side. It traversed in its external portion the right optic tract, of which about half the thickness was lacerated. Then, penetrating obliquely into the superior portion of the right cerebral peduncle, the gimlet traversed this peduncle step by step, and escaping at the base of the brain, a little below the tubercula mammillaria, was stopped probably by the bone, which bore no trace of injury.

The point of emergence of the instrument forms a little rounded wound about one millimetre in diameter, and distant from the adjacent parts as below:

Distance from the inferior portion of the mammillary tubercles,	1½	millimeters.
Distance from the inter-peduncular line,	3	"
" " " external line of the right peduncle,	8	"
" " " superior portion of the protuberance,	8	"

The trace of the wound is more or less anfractuous, its walls are reddish, slightly yellowish in portions, and are formed of cerebral substance mixed with blood and degenerated.

Microscopic examination detected in these portions of the debris, nervous elements, a large number of granular bodies, some of which are formed by simple agglomeration of fatty granulations,

whilst others present an envelope, a nucleus, and a nucleolus.* There is, moreover, a very rich proliferation of nuclei of vessels, and an incipient formation of an interstitial cellular network, and a very few globules of hæmatosine.

The left hemisphere, the tubercula quadrigemina, and the other portions of the brain, were healthy.

The two eyes were examined, and presented no alteration.

It was not possible to determine, either with the naked eye or by microscopic examination, degeneration of the right anterior pyramid, nor of the opposite half of the cord.

WOUND OF THE RIGHT HEMISPHERE, EXTENDING TO THE EXTERNAL PORTION OF THE CORPUS STRIATUM; FORMATION OF AN ABSCESS IN THIS COURSE; ROTATION OF THE HEAD AND OF THE EYES TO THE RIGHT; VERY MARKED REVOLUTION FROM THE LEFT TO THE RIGHT.

Exp. II. Small adult bitch, of the terrier breed.

On the 6th of December, 1867, I perforated with a gimlet, having a diameter of two to three millimetres, the cranial vault of the right side, and buried the instrument to a certain depth in the cerebral substance: no symptom followed.

I effected a new perforation at a little distance from the first, and I buried still more deeply the instrument in the right cerebral hemisphere.

Immediately the animal commenced to turn from left to right, a spiral movement with a short radius. The head was slightly inflected upon the axis of the neck, the vertex being directed from the left side of the animal, and the left eye being upon a lower plane than the right; the muzzle, on the contrary, was turned to the right shoulder.

The two ocular globes were directed both strongly from the right side, the left iris touching the internal angle, the right iris the external angle of the palpebral openings. The sclerotic of the left eye was apparent in the external angle, and that of the right eye in the internal angle.

* M. Bouchardat has very well described these two kinds of granular bodies, attributing the first to *necrobiosis*, the second to inflammatory action. (See Thèse de M. Poumeau, p. 110 et suiv. Paris, 1869).

Upon elevating the head, which was easily done, for there appeared to be no stiffness of the neck, the deviation of the ocular globes from the right side appeared yet more marked.

In the act of turning, the animal threw himself frequently against objects which he met, and appeared to see imperfectly.

There was also perceptible a slight hemiplegia of the left side, especially in the anterior paw. The animal, when pushed, appeared to fall more readily upon the left side than upon the right.

12th of December. The same symptoms have persisted, and to-day they are still more decided. The animal suffers and groans. When placed upon his feet he is exhausted, he bends himself into an arc of a circle, with the concavity turned to the right. The muzzle is directed to the right, and approximates nearly to the right thigh. The two ocular globes are both turned from the right side. In walking, the animal describes a spiral movement from left to right, forming a curve with a radius smaller even than upon the day of the operation.

The animal was killed by hanging.

Necropsy.—Right hemisphere. The cerebral meninges exhibit nothing particular. Two small wounds are observed upon the occipital vault; one very superficial, extending scarcely through the gray substance, and evidently produced by the first puncture which I made.

The second wound, situated more externally, penetrates deeply, and after having traversed the white substance of the centrum ovale, reaches the external portion of the corpus striatum. At this point, a large purulent focus has been formed, which is located especially at the level of base of the corpus striatum and the peduncular irradiation. This collection (of pus) attains a diameter about equal to that of the cerebral peduncle.

The pus has penetrated into the right ventricle, and thence has spread into the third, thence by way of the calamus scriptorius, it has been diffused over the superior portion of the cord, which is enveloped in pus and false membranes.

In this purulent collection are many granular leucocytes and true non-nucleated granular bodies, evidently formed by fatty granulations aggregated into groups. There is no appreciable degeneration of the peduncle, nor of the anterior pyramid.

The *left hemisphere* is healthy, as are also the cerebellum and its peduncles.

WOUND OF THE RIGHT HEMISPHERE; SLIGHT ROTATION FROM LEFT TO RIGHT; ROTATION OF THE HEAD AND EYES TO THE RIGHT.

Exp. III. Rabbit. January 10, 1868.

I perforated with a gimlet the vault of the cranium on the right side, and buried the instrument into the cerebral substance. There followed a rotary movement from the left to the right, which continued two or three minutes; the left pupil was contracted, the right dilated, the left eyelid depressed.

No perceptible hemiplegia, hebetude; after half an hour the pupils were equal, dilated, both lids being open. The animal has a tendency to turn the head from the right side, and when he is excited he turns more frequently to the right than to the left. Slight tendency to spiral movement from left to right.

Necropsy. Meningeal hæmorrhage, which surrounds the base of the brain and the medulla oblongata.

The injury was apparent upon the external portion of the *right hemisphere*, at the level of the union of the frontal with the sphenoidal lobe. The right olfactory peduncle was slightly lacerated. There was little blood in the ventricle. The deep portions (corpora striata, optic thalami, tubercula quadrigemina) were not involved.

WOUND OF THE RIGHT HEMISPHERE; NO SPIRAL MOVEMENT; SLIGHT ROTATION OF THE HEAD TO THE RIGHT.

Exp. IV. Rabbit. January 17, 1868.

By the same process I wounded the brain. There was no manifest spiral movement produced, but it was observed that the animal had a tendency to turn the head rather to the right than to the left, and when it was irritated it turned itself more frequently from the right side than from the left.

The pupils were equal; the eyes not sensibly deviated.

January 18. The preceding symptoms are no longer appreciable, and the rabbit turns as well from one side as from the other when frightened. He was killed.

Necropsy. Slight meningeal hæmorrhage at the base. The instrument had reached the anterior and external portion of the right frontal lobe; the cerebral substance was mingled with blood. The olfactory peduncle was cut throughout its whole thickness. The right corpus striatum was very slightly lacerated in its external and anterior portion.

WOUND OF THE RIGHT HEMISPHERE AND OF THE CORPUS STRIATUM; NO SPIRAL MOVEMENT; SLIGHT ROTATION OF THE HEAD TO THE RIGHT.

Exp. V. Rabbit. January 17, 1868.

The same operation. The rabbit described no spiral, but had a tendency to incline the head to the left, carrying the muzzle to the right; the eyes were slightly turned to the right (?). The left eye was more prominent, the pupil more dilated, than the right. Very slight nystagmus.

January 18. Nothing appreciable. The rabbit was killed.

Necropsy. The instrument had penetrated the right hemisphere in the plane of the union of the frontal with the sphenoidal lobe. The hemisphere was transfixed, and at its base; the wound was situated about two millimetres outside of the origin of the right olfactory peduncle.

The instrument had wounded the posterior-external portion of the corpus striatum, and slightly the anterior-external portion of the optic thalamus. A collection of blood extends a little below the optic thalamus into the anterior extremity of the sphenoidal lobe.

WOUND OF THE RIGHT HEMISPHERE; OPTIC THALAMUS; ROTATION OF THE HEAD AND OF THE EYES TO THE RIGHT; TENDENCY TO SPIRAL MOVEMENT FROM LEFT TO RIGHT.

Exp. VI. Rabbit. January 13, 1868.

I perforated the cranium and wounded the brain.

The head was inclined from the left side and in rotation to the right, the muzzle was directed from the side of the right shoulder. The eyes were slightly divergent to the right, which was especially apparent in elevating the head of the animal; the sclerotic then appeared from the side of the external of the left eye, and from that of the internal palpebral angle of the right eye.

When the animal was excited, there was observed a slight tendency to turn spirally, describing a circle of great radius.

Necropsy. The wound had extended to the level of the middle of the right hemisphere, had traversed the lobe, lacerated the tentorium of the right side, as well as the anterior portion of the right optic thalamus, which was infiltrated with blood.

The wound had not involved the deeper portions of the optic thalamus.

The corpus striatum and the other portions of the encephalon were uninjured.

WOUND OF THE RIGHT HEMISPHERE, CORPUS STRIATUM AND OPTIC THALAMUS; ROTATION OF THE HEAD AND OF THE EYES TO THE RIGHT; SPIRAL MOVEMENT FROM LEFT TO RIGHT.

Exp. VII. Rabbit. January 17, 1868. The same operation. The rabbit turned his head to the right, inflecting it slightly from the left side, in such manner as to direct the vertex slightly from the left side. The ears are both at the left of the animal. The eyes are both plainly turned to the right. The sclerotic appeared at the external angle of the left, and at the internal angle of the right eye. Left pupil more dilated than the right. Slight nystagmus.

When the animal is excited he executes a spiral movement, of short radius, from left to right.

The left fore paw seems to be a little less feeble than the right.

January 18. The same symptoms of very slight left hemiplegia and of rotation spirally from left to right. Pupils equal.

The rabbit was killed.

Necropsy. The instrument had wounded the upper portion of the right hemisphere in the plane of the union of the frontal with the sphenoidal lobe, at about two millimetres from the interhemispheric fissure. It had passed outside of the right corpus striatum, which was, as it were, raised and detached, and had wounded the right optic thalamus, of which the nervous substance was broken up and mingled with blood.

WOUND OF THE LEFT OPTIC THALAMUS; ROTATION OF THE HEAD AND OF THE EYES TO THE LEFT; SPIRAL MOVEMENT FROM RIGHT TO LEFT.

Exp. VIII. Rabbit. January 15, 1868. By the same process I wounded the brain.

The animal bent his head from the right side, turned it to the left, the muzzle being carried from the side of the left shoulder; the two eyes were slightly deviated to the left.

The animal, when excited, described a spiral movement from right to left with a large curve.

January 16. The same condition, the pupils equal, head and eyes turned to the left, spiral movement from right to left.

January 17. *Necropsy.* There was observed upon the upper surface of the right hemisphere in the plane of the median portion, in an antero-posterior direction, and about one millimetre from the interhemispheric fissure, a little wound about one millimetre in diameter.

In penetrating deeply, the instrument passing obliquely from the left side, traversed the corpus callosum in the median line and wounded the anterior wall of the third ventricle, which contained blood and brain substance mixed with blood. It was observed that the left wall of the third ventricle (optic thalamus) was broken up and infiltrated with blood, especially at the level of its anterior portion, whilst the right optic thalamus was simply very slightly scraped, and exhibited perfectly normal consistence and color.

WOUND OF THE LEFT OPTIC THALAMUS; ROTATION OF THE HEAD AND OF THE EYES TO THE LEFT; SPIRAL MOVEMENT FROM RIGHT TO LEFT.

Exp. IX. Rabbit. January 16, 1868. By the same process I wounded the brain.

The animal turned his head from the left side and inclined it slightly to the right. The eyes were both directed from the left side; the pupils were equal. In walking, the animal described a spiral movement from right to left in a curve of short radius.

January 16. The same symptoms.

January 17. Depression, pupils equal, the head and eyes are

always directed to the left. The rabbit, when excited, described a spiral of short radius, from right to left.

He was killed by decapitation.

Necropsy. No sub-meningeal extravasation.

The instrument had wounded the right hemisphere very near the median portion of the interhemispheric fissure; it had turned obliquely to the left, and traversing the corpus callosum in the median line, had broken up the left optic thalamus. There was at this point a hæmorrhagic collection formed of cerebral substance mingled with blood, and embracing the entire thickness of the optic thalamus. The right optic thalamus was scarcely scratched.

The corpora striata were not injured.

I can compare with these nine experiments, IV and VI of the *Memoire sur le Ramollissement*, which my colleague M. J. Colard and I presented in 1865 to the Biological Society.

Dogs, the subjects of these experiments, presented, after the njection of water holding in suspension grains of tobacco, the phenomena of spiral rotation directed from the side opposite to a slight hemiplegia; and the necroscopic examination demonstrated to us in one case a focus of softening limited to the side toward which the spiral movement was directed, and in the other a focus of softening in each hemisphere, but more characteristic and more extensive, in surface and in depth, on the side toward which the spiral movement was directed.

Rotary movements produced by unilateral lesions of the encephalic isthmus.

As well among the inferior vertebrata as among the mammiferæ, the movements produced by lesions of the encephalic isthmus are sometimes a spiral, and sometimes a gyratory movement or rotation upon an axis.

I indicated previously one of the causes of obscurity relative to the determination of the direction of rotation upon an axis; I will not here revert to this subject, but I will simply recall that the direction of the movement upon an axis is the same as that of the spiral, that these two movements are performed in the

direction indicated by the deviation of the eyes, and if the animal is displaced upon the ground into a direction opposite to the rotation which he effects upon his axis, that results only from the friction of the ground.

The direction of the rotation, in the case of unilateral lesion of the isthmus, is variable, according to the point of the isthmus which has been wounded, and it is not unfrequent to perceive, during the first moments which follow the operation, a spiral movement in a direction opposite to that which is established definitely some minutes later. This peculiarity was pointed out to me by M. Vulpian.

Let us examine the direction of this rotatory movement according to the different unilateral lesions of the isthmus.

Magendie,* specifying more clearly phenomena already perceived by Pourfour du Petit† and by Serres,‡ observed that injury of the middle cerebellar peduncle occasioned rotary movements, produced always *from the same side as the section:* he remarked, morever, that the eye of the wounded side was directed downward and forward, that of the opposite side upward and backward. Magendie, by making a section of the cerebellum, in such a manner as to leave three-quarters to the left and one to the right uninjured, observed that the animal rolled to the right, and that the eyes were placed as if he had cut the right peduncle.

M. Longet,§ in his *Traité d'anatomie et de Physiologie du Système Nerveux*, asserts, as does M. Lafargue,‖ that rotation is effected, on the contrary, from the side opposite to the section of one of the middle cerebellar peduncles. Since that time, M. Longet ¶ has expressed the opinion that this difference between his results and those of M. Magendie resulted from the fact that the middle peduncle contains, especially posteriorly, non-decussating fibres, and decussating fibres anteriorly.

* Magendie, *Jour. de Phys. Expérim.*, 1824, t. IV., p. 399, et *Leçons sur les Fonctions et les Malad: du Syst Nerv.* Paris, 1839.

† Pourfour du Petit, *Nouv. Syst. du Cerveau.* Paris, 1766.

‡ Serres, *Jour. de Physiol. Expérim. de Magendie.* 1823, t. III.

§ Longet, *Anat. et Physiol. du Système Nerveux.* Paris, 1842.

‖ Thèse de Paris, 1828.

¶ Voyez *Traité de Physiologie*, 1860, t. II, p. 406.

With the partial lesions of a cerebral peduncle, made immediately in front of the protuberance and a little beyond, M. Longet observed a spiral movement from the side opposite to the lesion, whilst Magendie, in cases of lesion of a cerebral peduncle, observed a circular movement from the side of the lesion.

M. Claude Bernard,* by wounding the cerebral peduncle behind the origin of the trigemini, observed that the revolution was made from the same side upon which the section had been performed. By making, on the contrary, the section in front of the origin of the trigemini, he observed the revolution from the side opposite to the section.

M. Schiff observed, in the case of lesion of the posterior parts of a cerebral peduncle, a rotary movement from the injured side.

M. Brown-Sequard,† in the case of lesion of some portion of the cerebral peduncle situated near the optic thalamus, observed a circular movement from the side opposite to the lesion; he observed rotation in the same direction with injuries involving the anterior and superior portions of the Pons Varolii, the portion of the medulla in which is inserted the glossopharyngeal, that portion of the spinal cord in which are inserted the first two or three pairs of nerves.

M. Brown-Sequard, on the contrary, observed a rotary movement from the injured side from injuries inflicted near the insertion of the inferior roots of the vagi nerve; he observed, with M. Martin Magron, the same direction of rotation following lesions of the medulla involving those portions in which are inserted the auditory and the facial nerve.

M. Vulpian,‡ after wounding the floor of the fourth ventricle, observed a rotation of the head and of the eyes from the side opposite to the injury, sometimes a spiral movement from the side indicated by the ocular deviation, sometimes a revolution upon an axis, in the same direction, and a displacement of the animal upon the ground in the opposite direction.

* *Mémoire de la Soc. de Biologie.* Annèe, 1849.

† Voyez *Note sur les Mouvements Rotatoires dans Jour. de Physiologie* du Docteur Brown-Sequard, 1860, t. III. p. 724.

‡ Voyez *Effets des lesions du plancher du quatrième ventricule, etc.* (*Mém. de la Soc. de Biologie.* Annèe, 1861.)

M. H. Paris published a case of hæmorrhage of the left lateral portion of the protuberance which occasioned in a cat a spiral movement from right to left, that is, from the side of the injury.

Messrs. Leven and Ollivier,* in numerous experiments performed upon the cerebellum, frequently observed the spiral or rotary movements occurring most frequently from the side opposite to the injury, but sometimes from the side of the injury.

It will be perceived, from this detail, that the directions of the spiral movement, and of the movements of rotation upon the axis produced by lateral lesions of the isthmus, may vary according to the parts involved.

In this case, as M. Vulpian remarks, in his *Cours de Physiologie*, (p. 586): "The direction of the movements of rotation spirally takes place most frequently from the injured side toward the healthy side, that is, from left to right if the injury is on the left. However, it is not rare to see the spiral movement performed in the inverse direction."

My personal experience exactly confirms these data.

Under this head should be classified lesions of the isthmus, lesions of one optic thalamus, and of one of the tubercula quadrigemina. Authors, as I have already stated, are not all agreed in this regard; but it is very possible that in attacking posteriorly the optic thalamus, the lateral portions of the isthmus are excited; the effects produced are then due to the encephalic isthmus. It has been apparent that in my experiments, I have always obtained, by attacking the optic thalamus from above downward, a rotation from the side of the lesion.

As to the tubercula quadrigemina or bigemina, I have convinced myself by experiments made upon frogs, in which these parts are readily discovered, that the direction of the rotation varies according to the part injured. Rotation seemed to me to be made most habitually in the direction of the injury, if that were situated entirely in the anterior portion of the tubercle, and from

* M. Leven and A. Ollivier *Recherches sur la Phys. et la Path. du Cervelet*, (*Arch. Gén. de Méd.*, 1862, t. II.). Voyez aussi Gratiolet et Leven, *sur les Mouvements de Rotation sur l'axe que determinent les Lesions du Cervelet*, (*Compte Rendu, Ac. Sc.*, 1860). Leven, *Nouv. Rech. sur la Phys. et la Path. du Cervelet*, (*Mém. Soc. de Biolog.*, 1864.)

the opposite side if the middle or posterior portion of the tubercula bigemina were attacked. In this last case the rotation was most marked and most persistent.

These differences in the results obtained after lesions of the isthmus, may be readily understood when it is remembered that the decussation of nervous fibres is not so complete at this as at a higher level.

The preceding experiments were made in view of my inaugural thesis,* in which I published them, comparing them to a very frequent but little known symptom of apoplexy of cerebral origin, toward which M. Vulpian directed my attention, I mean the conjugate deviation of the eyes and rotation of the head, from the side opposite to the hemiplegia.

M. Vulpian, in a course upon the physiology of the nervous system, delivered, in 1864, at the Museum of Natural History, compared this phenomenon to the movements of rotation observed in animals, and the following year I published in the *Gazette Hebdomadaire* a short note upon this point.

I have been able to collect fifty-eight observations, of which fifty-five were followed by necropsy, the majority being due to the kindness of Messrs. Vulpian and Charcot.

After studying these observations, and comparing them with the results of my experiments relative to the rotary movements observed in animals subsequent to unilateral cerebral lesions, I have succeeded in demonstrating the identity of these phenomena.

It was apparent indeed from the experiments reported above, that rotation resulting from lesion of a cerebral hemisphere was accompanied by conjugate deviation of the eyes and by rotation of the head from the side of the wounded hemisphere. When the injury was seated in the encephalic isthmus, the direction of the rotation was subject to variation, but was effected in the direction indicated by the ocular deviation.

In all the observations which I have been able to gather, of rotation of the head and eyes accompanying a lesion of the brain properly speaking, this deviation of the eyes and of the head took

* *De la Déviation Conjuguée des Yeux, et de la Rotation de la Tête dans certains cas de Hémiplégie.* Thèses de Paris, 1868, chez V. Masson et fils.

place from the side of the wounded hemisphere, from the side opposite to the hemiplegia.

I have cited cases in which this deviation occurred after even superficial lesions of the brain, but the most numerous cases were due to more profound injuries, approximating the corpus striatum and the peduncular irradiation. In four observations, on the contrary, the encephalic injury was situated in the encephalic isthmus, in which I include the cerebellum; rotation of the head and eyes occurred three times from the side opposite to the injury, and once from the side of the injury.

It should be added, that in several of these observations a tendency was observed, to a movement of translation from the side indicated by the ocular rotation, which approximates these phenomena still more closely.

I will no longer dwell upon the facts developed in my inaugural thesis, as it is my intention to treat here only the purely physiological portion of the treatise. W. H.

Selections.

Upon the Therapeutical Value of the Sulphites in Phlegmonous Angina.—Paper read before the Sacramento Society for Medical Improvement. By Gerrard Geo. Tyrrell, L.R.C.S.I., and K. & Q.C.P.I.

So much has been written, and so many conflicting opinions expressed, upon the therapeutical value of the sulphites in disease, that it is with the utmost diffidence I venture to bring the subject under the notice of the Society this evening. I am, however, emboldened to do so, from the conviction that I have discovered in the sulphites a certain prophylactic against, and a frequently successful agent in the cure of certain diseases affecting the throat, more especially in that common and most troublesome complaint known as phlegmonous angina, acute tonsillitis, or quinsy. I am still further stimulated to bring this subject under your observation from the fact that one of the great lights in medicine, whose eminent reputation is universal, and from whose teaching we have all acquired knowledge, the great Trousseau, says, "I

repeat, gentlemen, phlegmonous angina is one of those diseases which are alike the glory and despair of all medication: their despair, because medicine cannot prevail against them; we are powerless to check their progress, to abridge their duration. Their glory, because they cure themselves, whatever we may do; and the temptation is to ascribe to the medication the honor of the cure." He then sketches the rise and progress of the disease, alludes to the different treatment advised—incisions, leeching, cupping, bleeding, etc. — and says, in spite of all, the disease continues its progress; in four or five days, perhaps in nine or ten, an abscess forms, and bursts, and the patient is well; all the remedies have been useless, and the more violent injurious. "Expectation," he continues, "is the best treatment to follow in the disease which now occupies our attention. But this treatment, I admit, is most difficult to make acceptable in practice, especially when you are beginning your career, and have not yet inspired that confidence which you will do later. In order to respond to the just demands of your patients, prescribe remedies of no great power. If you really cannot cure them, at least leave some illusion to those who suffer, and do not make them despair by avowing your impotence; order acidulated and demulcent gargles and emollient fumigations, knowing perfectly well that they will effect nothing toward the cure of a disease which will in a short time come to a termination." Such is the language of Trousseau, and such his opinion of the incurability of acute tonsillitis. To moderate, if not entirely disprove, these very positive assertions, and to maintain the efficacy of treatment in anginose affections, will be my privilege this evening.

Although I am aware that authorities are not wanting who deny the therapeutical value of the sulphites in any disease, and even in this Society are there members whose scepticism upon this point is not disguised, I will endeavor to bring before your notice to-night the records of some cases in my own practice, no matter how feebly portrayed, which by their symptoms demonstrate the fact of either impending or established disease; and if I can satisfy you by such cases, treated after the manner hereinafter to be stated, that I have succeeded in arresting such disease, or even shortened its duration one day, then my object will have been accomplished, and your co-operation insured, in giving this agent a fair and impartial trial, and perhaps rescue from unmerited neglect a drug, powerful for good, and most worthy of our consideration. We are all conscious of the fact, although perhaps insensibly acquired, that the zymotic theory of disease has taken a firm hold upon our senses; and, indeed, reflection leads us to believe that many of the diseases which we were formerly willing to consider as local in their nature, and remedial by local treatment, are but the result of a certain poison or fer-

ment in the blood, which evinces its presence by attacking certain organs, or producing certain effects, which are known to us under the names of diphtheria, erysipelas, scarlet fever, measles, small-pox, etc. In what that poison consists we know not; whether it be due to the passage from body to body of living particles of germinal matter, descended from the germinal matter of organism itself, or from the growth and multiplication of vegetable organism, or the result of mephitic vapor, or noxious gas, derived from decaying matter: of this we are ignorant; but we do know that certain effects follow its development in the human system, and that this poison, when once developed, has the power, as a general rule, of reproducing itself. Under this class of diseases I would venture to ask for phlegmonous angina, or quinsy, a place. I believe its constitutional origin can hardly be doubted, when we calmly reflect upon the manner of its invasion; the general lassitude which precedes an attack, the pains in the head and limbs, the alternate chills and flushes of heat, the loss of appetite, the coated tongue, the quick pulse, the high-colored urine, and constipated bowels—symptoms developed before the amygdaloid glands give evidence that *there* is the force of the attack to be expended—all point with unmistakable exactitude to the constitutional and zymotic character of the disease; and, in truth, until the constriction and dryness of the throat, the injection of the fauces, and the enlarging tonsils, reveal the secret, he would be a bold practitioner indeed who would dare to say from the symptoms present that his patient was not going to have a typhoid fever, diphtheria, ague, or some other zymotic affection. Classing, then, with your permission, phlegmonous angina among the zymotic diseases, we will briefly sketch the theory of the use of the sulphites.

From his memoir, it seems, that accepting the zymotic theory as true, Guiseppe Polli, of Milan, noticing the power which sulphurous acid possessed in arresting vinous fermentation, was led to believe that the same agent would arrest catalytic action in the human system. Aware, however, of the danger of introducing sulphurous acid into the animal economy, he conceived the idea of uniting the acid with an earthy base, and thus securing a salt, with which he might safely commence his experiments. The results of his labors are historical, and being no doubt familiar to each of you, I will not trespass upon the time of the Society by detailing them here. I think, however, that his experiment of injecting a dog with the nasal discharge from a glandered horse—having first taken the precaution of giving the dog a couple of drachms of bisulphite sodæ daily for several days before the operation—should give us a hint in the therapeutical use of the sulphites, of which we would do well to avail ourselves when possible. In these experiments Dr. Polli found that the action

of the sulphites was quite as decided as the sulphurous acid itself in checking fermentation, and established therefrom two great facts. First, that sulphites, as such, are carried into the circulation; and secondly, that the presence of these salts in the liquids and solids of the body retards putrefactive fermentation for a lengthened period.

Notwithstanding the assertion of the celebrated Claude Bernard, that "it is impossible to neutralize these ferments in the living organism," because, he says, "it would be necessary to interfere with the character of the blood to such an extent that it would be no longer capable of maintaining life," Professor Polli next tested the truth of his discovery upon the human organism, and invariably with a satisfactory result, but modestly adds, "To the test of clinical investigation, and clinical result, I leave the issue of my discovery;" and further on, "I wait for the verdict of the clinical students of Europe." His appeal was not long in being answered, for he states that since he published his first memoir, in 1861, he has had no less than 158 papers published in answer to his call—all, or nearly all, confirmatory of his observations. Upon reading the first mention, to me, of Dr. Polli's discovery, published by Dr. De Ricci, of Dublin, in the *Dublin Quarterly Journal*, November, 1863, I determined to test the matter for myself. Unfortunately, at that time no bisulphites were to be had upon the Pacific coast, and it was not until the spring of 1866 that I was able to procure a pound of the bisulphite of soda. My note-book then informs me that I tried this salt in several cases of scarlet fever, giving ten to fifteen grains every three or four hours, without any well-marked advantage over my former treatment by quinine and iron. Again, I find a case of pyemia, in which I gave my patient twenty grains every four hours, without mitigating the disease in any respect. This result I rather anticipated, as the case was not seen until several of the joints contained pus. I find myself next employing the sulphites in the treatment of some cases of typhoid fever; still I was not aware of any striking result that followed, except that they had the power of diminishing the extreme fetor of the alvine evacuations. Many other articles in the materia medica possessing the same power, my faith in the therapeutical value of the sulphites became very lukewarm, and I prescribed them but seldom. In 1868 we had an epidemic of a species of influenza, accompanied by a remarkable prevalence of anginose affections, especially acute tonsillitis, terminating in abscess. Believing then, as I do now, that tonsillitis is but the local effect of a general poison, and a remnant of faith remaining in the anti-catalytic power of the sulphites, I determined to give them one or more trials, but in a different manner than heretofore.

My idea was now to push them to saturation, as we do other alkalies in the treatment of another poison, rheumatic fever, and

get their constitutional effect, if possible, before the zymotic poison had full possession of the system. It so happened that I was the first patient upon whom my primary experiment was to be made. In April. 1868, I was seized with the usual symptoms of impending disease—lassitude, chilliness alternating with flushes of heat, coated tongue, pain in limbs, etc. Soon the dryness and constriction of the throat were perceived, with pain on deglutition, and that horrible feeling of a foreign body in the pharynx, which in vain you try to dislodge. I now knew that my old friend, acute tonsillitis, was about to develop itself, as I was a victim to such attacks, and had almost made up my mind to put in my regular two weeks of sickness, like a philosopher. Upon examining my throat, I noticed both tonsils swollen, their mucous crypts filled with exudation, the velum palati congested, the back of the pharynx a vivid red color, and dry. I dreaded the suffering appertaining to a tonsillitic abscess, and finally came to the conclusion, that with my ideas upon the zymotic origin of the disease, mine was just the case to ascertain whether there was any virtue in the sulphites or not. Accordingly, I ordered a mixture, containing thirty grains of bisulphite of soda to each dose of a table-spoonful, which was to be taken regularly every hour. I commenced at 12 noon; at 8 P. M. I felt decidedly better, and could swallow with but little inconvenience; the tonsillitic exudation had disappeared, and the vivid redness of the velum and pharynx was subsiding. I continued the medicine regularly throughout the night, and at eight next morning almost all traces of the disease had vanished. This result was so striking, and so exceedingly gratifying to me, that I determined to pursue my investigations further.

Two days afterward, Mr. D. called at my office, complaining of the usual initiatory symptoms of tonsillitis. His tonsils, although swollen and congested, had not as yet given any evidence of exudation upon their surface; he was very feverish, with intense thirst, and some pain upon swallowing. This was his second attack within six months. I prescribed for him thirty grains bisulph. sodæ every hour, which he promised to take faithfully, as I informed him that it was only an experiment I was trying, and that if it failed he would be no worse off than before. Next morning he called again; the fever and thirst had subsided; his tongue was cleaning; the redness of the fauces was fading; and, altogether, he was very much better. That evening he declared himself well, but continued his medicine, to make the cure certain.

A third case presented itself soon after; but one tonsil was swollen, and the initiatory stage was not severe. In this case I thought I might diminish the dose of the medicine, and produce, perhaps, as good results: accordingly, I administered twenty

grains every three hours; at night the medicine was omitted; next morning the constriction of the throat set in, the redness extending across the velum palati; as evening approached all the symptoms became aggravated, and finally the case terminated in abscess. Still not fully alive to the necessity of saturating the system to produce a successful result, I treated my fourth case with scruple doses of the drug every three hours, without success —the case terminating in abscess upon the tenth day. I was now fully convinced that my first idea was either the true one in this disease, or that the sulphites were worthless, and that both my own and Mr. D.'s case would have terminated in resolution without any treatment. When, therefore, my fifth case presented itself, I ordered thirty grains every hour, day and night. In this case, although the symptoms of acute tonsillitis were as well marked as in either of the others, the result was quite different: in twenty-four hours all signs of the disease had been subdued, and the patient was convalescent. In the following cases the results were the same:

Mrs. McJ.; ailing twelve hours; complains of chills, alternating with fever; pains in the back and limbs, and sore throat. Upon examination the left tonsil was seen engorged; velum palati and back of pharynx very red; great dryness of throat, with pain on swallowing. Ordered thirty grains of bisulph. every hour, day and night; in twenty-four hours all severe symptoms had ceased, and convalescence was established.

Mrs. McD., a resident in the same house, was attacked one week subsequent to the above case. The initiatory symptoms set in with great severity; in twelve hours from the premonitory chill both tonsils were covered with a white exudation, and the pain on deglutition was intense; in addition to the other symptoms, there was engorgement of submaxillary and parotid glands with shooting pains through both ears: in fact, the case closely resembled an attack of diphtheria in its prominent features. I ordered the usual thirty grains of sodæ bisulph. every hour, together with a gargle of the hyposulph. of soda and honey, to relieve the great dryness of the pharynx. In this case, thirty-six hours constant treatment seemed to allay all the worst symptoms of the attack, and in twelve hours more convalescence was established.

Mr. F. has since childhood been the subject of acute tonsillitis, whenever any derangement of his health occurred—the attack almost always ending in abscess. Has tried every known remedy to avert the attack or shorten its duration; has succeeded twice in preventing abscess by constant leeching in the premonitory stage; when that failed, he found that no medication would succeed. In January last he came to me, complaining of his usual symptoms preceding an attack of tonsillitis. I prescribed the sulphite, upon

condition that he would take it as ordered, as I considered his case a crucial one. Next morning he called to say that he was no better, but certainly no worse; had taken the medicine regularly until twelve midnight, then fell asleep, and, of course, omitted it. I strongly urged the continuance of the remedy for another twenty-four hours, and then if he was no better I would confess my disappointment; he did so, and the following morning met me in the street, feeling, as he said himself, "All right." He had acknowledged his disbelief in the power of medicine to save him from abscess, as he had taken "bucketsful" without being relieved. He was now satisfied, however, that the bisulphite of soda had the power, and was determined to resort to it again upon the first intimation that his old enemy was preparing for an attack.

I could increase this list by some fourteen additional cases, but as they would be only a repetition of those already enumerated I will not occupy the time of the Society in detailing them. Suffice it to say, that among the fourteen not one terminated in abscess, and not one exceeded forty-eight hours in duration after the commencement of the treatment by the sulphites.

The last cases that I find in my note-book, as treated by the sulphites, are three of diphtheria. One was a child, two years old, to whom I was called last December. She had then been two days ill with what the mother supposed to be an ordinary sore throat. The child appeared cheerful, ate and drank without seeming difficulty or pain. Upon inspection of the throat, I found both tonsils, velum palati and back of pharynx literally covered by a diphtheritic exudation, of a yellowish color and leathery consistence; around the outer margin of the false membrane was a thin, red line, as if separation was about to take place. The examination caused the child to cough, but no stridor was then perceived. The mother said that the only serious symptom the child presented to her was great restlessness at night, with some heat of skin. I ordered eight grains of bisulph. every hour. The following morning both tonsils, velum and pharynx were of a vivid red color, but the exudation had disappeared. The child had slept better, was still cheerful, and drank her milk greedily; her respiration was a little hurried, and her cough a little raucous, which boded no good. I continued the sulphite. Toward night high fever supervened, and it was evident, from her cough, that the false membrane had crept into the larynx. Diphtheritic croup was established, and in twelve hours more the child had breathed her last sigh.

The remaining cases occurred upon Jibboom street—one of the worst localities, if not the very worst, in the city for such a disease to occur.

A. D., aged three years, was seized upon the night of the 23d

January with a severe chill, followed by high fever; next day he appeared to be much better, but his mother noticed that he refused to eat, and had considerable thirst. The same night the fever was very intense, and next morning (25th) the child complained of his throat being sore. I was then sent for. Upon arrival I found the little fellow sitting up in bed, very feverish, but cheerful; his face was flushed, pulse quick, tongue coated, and breath fetid. After some little coaxing, I succeeded in getting a good view of his throat. The examination revealed one-half of the velum pendulum, together with the left tonsil, covered by an exudation exactly similar in appearance to the pedicle left by collodion after the evaporation of the ether. He did not complain of any difficulty or pain on swallowing. His mother had no idea that her child was seriously ill of so fatal a disease as diphtheria; it was therefore necessary for me to impress the fact upon her mind, in order to have my instructions faithfully carried out. I ordered the child a strictly milk diet, and ten grains bisulph. sodæ every hour, day and night. In twenty-four hours of this treatment the pedicle had disappeared from the velum, the fever had ceased, and sleep was easy. A white patch still remained upon the tonsil, which another twenty-four hours treatment sufficed to remove, and the child made an uninterrupted recovery.

A few days afterward I was summoned to see the infant sister of the same boy. Found, upon inspection, that both tonsils were covered by false membrane, extending backward to the pharynx; the velum was free from it. To this infant, fifteen months old, I gave five grains bisulph. sodæ every hour. Thirty-six hours constant treatment removed all trace of exudation, and the child recovered.

These three are the only cases of diphtheria in which I have relied exclusively upon the bisulphite of soda as the curative agent, in addition to the *vis medicatrix naturæ*. The number is too small to base any opinion upon as to the value of the sulphites in this disease. It certainly seemed to possess the power of speedily removing the false membrane, and arresting the disease, or in these particular cases the *vis medicatrix naturæ* worked with unwonted vigor. I am, at all events, encouraged to give the drug a further trial, should any cases of diphtheria present themselves during the year.

I have now fulfilled my promise, and laid before you a series of cases of actual or impending disease, eight of which I have given somewhat in detail; the remaining fourteen being similar in their rapid convalescence, their amplification was not deemed necessary. In all, therefore, I have enumerated twenty-two cases of acute phlegmonous angina, twenty of which were either summarily arrested, or their duration abridged, under the use of the sulphites;

that is, unless you consider that the *vis medicatrix naturæ* stepped in methodically and cured these twenty cases, I can ascribe their rapid amelioration to no other cause than the anti-catalytic action of the sulphites. If you concede to me this point, then is my task complete in disproving the sweeping assertion of Trousseau, "That medicine cannot prevail against this disease; that we are powerless to check its progress or abridge its duration." Nay, not content with this, he says, as if to impress the matter fully on his reader's mind, "I repeat, for the third time, that anti-phlogistics, revulsives, topical astringents, and *all* other kinds of treatment, are without power to impede the course of inflammatory sore throat—the duration of which *nothing* can curtail;" and further asserts, "that once inflammatory sore throat has declared itself, it never goes back." There is one other remark of Trousseau's which I will here notice for its great candor. He says, that "there are men who maintain gravely that they can cut short a quinsy in three days," and asks, "Where is the physician of skill sufficient to decide whether a sore throat, which has just made its appearance, is certain to be a quinsy? For my own part," says this physician, "I completely renounce all claim to ability to give a positive opinion under such circumstances, and I doubt whether others are more competent."

As this paper, Mr. President, brings me directly under the charge of maintaining the possibility of cutting short a quinsy in three days, and inability to diagnose the disease, I reply by saying that it is not necessary to diagnose infallibly that the case will be one of quinsy. Suppose the case to be one of membranous sore throat, so often confounded with diphtheria, or acute pharyngitis, or rheumatic sore throat, or any other anginose affection. What does it matter? Is it not sufficient for any physician to know that he has a case of impending disease before him; and if he can by therapeutical, or any other means, arrest the spread of zymosis, and thus cut short the impending disorder, what difference does it make as to the particular portion of the organism in which that zymotic poison would have developed itself? The physician's great triumph consists in his power, first, to prevent, and secondly, to arrest disease in its incipiency, and not wait for hours or days to ascertain whether the *prodromata* of disorder will develop themselves in a typhoid fever or a quinsy. And I assert, as far as the experience of twenty cases will permit me, that phlegmonous angina, or take it generally, a common sore throat, with all the incipient symptoms of acute tonsillitis, can be cut short, or its duration abridged, by the sulphites, and especially the bisulphite of soda. But in order to obtain this result, it is, in my opinion, necessary: First, to saturate the system as rapidly as possible with the salt. Secondly, that any dose under thirty grains an hour is liable to fail in this effect. Thirdly, that the bisulphite of soda

is the most reliable salt for that purpose, as both the hyposulphite of soda, and the bisulphite of magnesia, are very prone to purge, which would defeat the object intended. Fourthly, all acids, either in the shape of drinks or gargles, must be strictly prohibited, as they decompose the salt, and render it inert. Lastly, the treatment should be commenced at the very earliest moment possible, and persisted in steadily, day and night, for at least forty-eight hours. If at the end of that time, the urine and the perspiration giving evidence of the thorough impregnation of the system with the salt, the disease is not arrested, I believe further medication to be useless, and the disease will run its usual course, to end in abscess.

I will now have the honor of submitting, for your deliberation and discussion, these remarks upon the value of the sulphites as a therapeutical agent in disease. Although I am afraid that I have fallen very far short in the object I had in view, I will trust in your kind indulgence, and ask your patient consideration for the propositions advanced in this paper:

First, that acute tonsillitis, or phlegmonous angina, and the membranous angina of Trousseau—diseases as closely allied as possible—are zymotic in character, and as much constitutional diseases as scarlet fever or diphtheria. Secondly, that, as zymotic in character, they are amenable to treatment by anti-catalytics, when properly and persistently administered. Thirdly, that in the bisulphite of soda we have a safe and efficient agent in the treatment of such diseases, and presumptive proof that when administered early in all diseases of like zymotic character, it will prove as efficacious as in the diseases under consideration this evening. And lastly, that when given under the circumstances proper for their administration, the sulphites are perfectly harmless in their effect, seldom producing vomiting or disorder of the bowels; and if at times they seem inefficient to arrest retrograde metamorphosis, they leave the patient in no worse condition than before.

I therefore will ask for your co-operation in giving this drug an extended trial, and am persuaded that you will not refuse your support, where you perceive an honest effort to arrive at a scientific truth, as it is only by the experience of many that a correct deduction can be made, and the value of any discovery ascertained. —*Pacific M. and S. Journal.*

Editor's Book Table.

[Note.—All works reviewed in the columns of the Chicago Medical Journal may be found in the extensive stock of W. B. Keen & Cooke, whose catalogue of Medical Books will be sent to any address upon request.]

The Practice of Medicine. By Thos. Hawkes Tanner, M.D., F.L.S., M.R.C.P., F.R.S.L., etc., etc. Fifth American, from the sixth London edition; thoroughly revised. Philadelphia: Lindsay & Blakiston. 1870. Pp. 1200, cloth. $6.00.

Dr. Tanner's "Practice" is very popular in England, the last edition, July, 1865, having been exhausted a considerable time before the author's large professional practice permitted him to revise and enlarge the work. It is the record of the learning and experience of an accomplished practitioner who had well illustrated the truth of Dr. Arnold's remark which he says has lessened the labor and anxiety incident to the preparation of each new edition: "That so long as you humbly learn, so long you may hopefully teach."

Not much space is given to general considerations, but his descriptions are uniformly both concise and perspicuous. He aims to give the student and busy practitioner that instruction which he needs for the immediate application of the art. Hence the therapeutic portion of the book may be said to contain its distinguishing characteristics. This is illustrated in the Appendix of Formulæ, constantly referred to in the text, which alone contains 117 pages. Under this heading, however, he refers to dietetic preparations, particular localities sought on account of their climate, and to the prominent mineral watering places.

Many practitioners object to the books that they are too indefinite in their therapeutic suggestions, but no such fault can be found with Dr. Tanner. He believes in actual medication, and although individuals may differ from him as to some of his methods and means, there is no mistaking his advice. A practitioner thoroughly grounded in the principles of medicine may, nevertheless, oftentimes be at a loss for the particular means to be used in the case

before him, and here Dr. Tanner's book will about invariably afford him ideas by which both his patient and himself will profit. The sciolist will be likely to degenerate into bald routine by its easy chart. The amount of additional matter in the present edition is about 365 pages.

A Treatise on the Theory and Practice of Obstetrics. By Wm. H. Byford, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College, etc., Author of the Practice of Medicine and Surgery applied to the Diseases and Accidents incident to Women, Chronic Inflammation of the Unimpregnated Uterus, etc. New York: William Wood & Co., 61 Walker street. 1870. Pp. 457. $4.50.

The late period in the month at which this treatise was received prevents extended notice. Prof. Byford has been long and favorably known to the professional public by his numerous communications to the medical press, his previously published elaborate books, and by his widely extended private and consultation practice.

Long and varied experience, scholarly habits of study, and excellent original capacity, have enabled him to lay before the profession contributions to the general stock of knowledge which deserve and receive the meed of high favor. He has achieved enviable success among medical writers.

The present volume is thoroughly practical in its character, with numerous woodcut illustrations well adapted to explain the text. Not much space is devoted to the discussion of mooted points, the author usually dismissing them with a simple announcement of his own opinion. We notice that he mentions favorably in cases where mere extraction is sought, Prof. Evans' Obstetric Extractor. Taken as a whole, although obliged to dissent from some of his views on certain points, we take pleasure in commending Prof. Byford's book as fully up to the times and a successful exposition of the subject.

On Microscopical Manipulation; being the Subject-matter of a Course of Lectures delivered before the Quekett Microscopical Club, January—April, 1869. By W. T. SUFFOLK, F.R.M.S. Illustrated with forty-nine engravings and seven lithographs. Philadelphia: J. B. Lippincott & Co. 1870. $2.00.

A capital little book, precisely what is needed by amateur microscopists. It is briefer and more compendious than that of Beale, and we have no doubt will become highly popular as a hand-book. It contains chapters on Construction of the Microscope; Mechanical Processes; Mounting Objects Dry and in Balsam; Mounting Objects in Fluid; Illuminating Apparatus; Polarized Light; Drawing and Micrometry; an Appendix on Apparatus, with concluding notes on practical points. The illustrations are excellent.

Pamphlets.

A Guide to the Examination of the Urine. For the Practitioner and Student. By J. WICKHAM LEGG, M.D., M.R.C.P., Physician to the St. George, Hanover Square, Dispensary. Second edition. Philadelphia: Lindsay & Blakiston. 1870. Pp. 89.

This is a little manual with flexible covers, containing a succinct statement of the more important characters of the urine and how to determine them, with an appendix describing the manner of estimating the urea, chlorides, phosphates, sugar, etc., by volumetric or other rapid analysis.

Sun Stroke and its Theory. By ELY VAN DE WARKER, M.D., Syracuse, N. Y. Reprinted from the N. Y. Med. Jour. D. Appleton & Co. 1870. Pp. 24.

The author discusses the history and statistics, diagnosis, prognosis, theory, pathology, treatment and prophylaxis. He has

collected in small space much valuable material. He recommends the cold douche carefully employed so as not to produce too profound sedation. If the patient can swallow, teaspoonful doses of brandy and chloroform, or other diffusible stimulant. Sinapisms, etc., to combat insensibility or sedation. Purgative enemata, followed by an enema of turpentine. Venesection is not commended, and in the convulsive form the douche should not be used. Chloroform in these cases has been advised, but in some cases seemed to hasten the fatal result. Warm baths with mustard, and the free administration of brom. pot. are suggested. Spirit drinkers and those who expose the neck or wear dark clothing are the most liable to be attacked.

Sir Charles Napier, when serving in Sindh, says of an attack of insolation he suffered there: "I had hardly written the above sentence, ten days ago, when I tumbled over by the heat with apoplexy; forty three others were struck, all Europeans, and all died within three hours except myself! I do not drink! That is the secret. The sun had no ally of liquor among my brains." Light clothing, the head and neck protected from the direct solar rays—better by a dampened handkerchief or even leaves under the head covering. "The only head dress worn by the natives of Abyssinia is a lump of butter, which by melting runs down the neck and shoulders and prevents their drying in the intense heat."

When the case presents itself, it is indispensable for correct prognosis and treatment that its individual peculiarities should be thoroughly appreciated. Dr. Van De Warker has done well in pointing out a number of essentially diverse conditions usually confounded under a common designation.

Remarks on a New Medium for Preserving and Putting up Pathological and Anatomical Specimens. Invented by EDWARD CLAPHAM, M.D., etc., Professor General and Micros. Anat., Medical Dep. Iowa State University. Also, by the same author: *The Introduction and Use of Arsenite of Soda, as a powerful and advantageous Antiseptic, in the Preparation of Cadavera for purposes of Practical Anatomy.* Pp. 12.

Prof. Clapham explains the advantages of the ordinary benzole of commerce, over alcohol, glycerine, etc., in the preservation of

soft preparations, in that it does not become discolored by contact with the animal fluids, or cause shreddiness or disintegration of them. It remains free from turbidity however much debris may subside. It does not bleach. Its great brilliancy and high refracting power endow it with superior advantages for displaying dissections of great delicacy and minuteness. Its trivial cost (about one-eighth that of alcohol), and resistance of low temperature where dilute alcohol speedily congeals. In the pamphlet directions are given for its use. Prof. Clapham claims priority in the introduction of this agent for this purpose.

The appendix, on the use of arsenite of soda, contrasts the use of this agent with other antiseptics commonly employed, and gives general directions for its preparation and application. We hope to hear further from this accomplished chemist and anatomist.

Some Clinical Observations on the Malignant Diseases of the Uterus. By FORDYCE BARKER, M.D. Read before the N. Y. Academy of Medicine, Feb. 17, 1870. Pp. 32.

Dr. Barker is an indefatigable worker, and observes with a good brain back of his eyes. It is true, scarcely any body else has as good luck as he has in the treatment of pseudo-membranous croup with turpeth mineral, but we can readily overlook this drawback in the light of his varied and excellent contributions to the progress of medical science and art. In the present monograph he does not discuss the pathology of the malignant diseases of the uterus, other members of the Academy having recently covered the ground.

Under the head of Frequency of the Disease, he inclines to the opinion that it is, relatively, as often met with in the country as the city. From the tables of the Registrar General, it appears there were in England from 1838 to 1842, 3,000 deaths from cancer of the uterus. In France, in the department of the Seine, from (and inclusive of) the year 1830 to 1835, there were 2,480 deaths from the same cause. From the mortuary records of New York city, there were 431 deaths from cancer of the uterus in the ten years ending Dec. 31st, 1865. The deaths during the three succeeding years and the first nine months of 1869, were 298. Comparative statistics show the Parisian mortality from this cause to exceed that of New York in the proportion of 413 to 79 annually in the years compared.

It would appear that the African race are comparatively exempt from the disease. With regard to the *Etiology* we deem Prof. Barker's remarks eminently worthy of quotation:

"Now, to my mind, all that these statistics prove is, that a vitiated constitution—a diathesis, whether it be inherited or acquired, whether it be tuberculous or cancerous, may predispose to the development of cancer. All the other causes which authors have assigned as predisposing to this disease, amount to just this and no more. I should say, then, nothing is known in regard to the *etiology* of this disease, as science, up to the present time, utterly fails to explain what are the causes of this special form of heteromorphous development. I shall add, there is no evidence that the *disease* is, in any proper use of the term, *hereditary*. The *diathesis* is, undoubtedly, often inherited. But it does not follow that the child of a parent who has died from cancer necessarily or even generally inherits the diathesis; for both the diathesis and the disease of the parent may have been acquired subsequent to the conception and birth of the child."

Not only this, but it should be remembered that the child has *two* parents, and peculiarities of organization result from this conjoint origin which may give the child a "constitution" or "diathesis" totally diverse from those of the parents—crudely expressed in "crossing of the breeds" in animals. The tendency towards death or disease in individuals, is usually better observed in brothers and sisters than in parents and children. One of the profoundest truths in etiology is contained right here. The *diathesis*, which in a parent may ultimate in tuberculous or cancerous cachexiæ, in diabetes, Bright's disease, paralysis, insanity, or inveterate cutaneous eruption, etc., etc., etc., by the controlling influence of joint parentage, climatic, dietetic, and, indeed, any and all other influences capable of affecting the body or its parts in anywise, may show its effect in a manner totally dissimilar in the child. There is a sense in which all diseases are hereditary—hereditary as tribal and national resemblances.

Dr. Barker's record of the comparative frequency of the forms of malignant disease of the uterus is as follows:

Cancer of the uterus, - - - - - -	487
Cauliflower excrescence, - - - - - -	18
Corroding ulcer, - - - - - - -	6
Recurrent fibroid, - - - - - - -	3

Scirrhus is "one of the rarest" forms, and colloid "very rare." He accepts the distinction between cancer and cancroid: the latter, or locally malignant form, is often extirpated and does not recur; the former is cured, if ever, so infrequently that the cases may be recorded as exceptional.

The monograph does not detail the symptoms systematically, as other authors sufficiently indicate them. Vaginal discharge, pain and hemorrhage are the three most prominent and characteristic symptoms. Primary symptoms are usually slight. None of the vaginal discharges are pathognomonic. Contrary to our own idea he asserts there is nothing peculiar or characteristic in their odor. In his experience pain rarely occurs as a prominent symptom until the disease is far advanced. In a large number of cases he has been struck by the absence of all appearance of cachexia up to the time of death. Peritonitis occurred in a large proportion of cases. Disorders of the urinary apparatus, etc., ordinarily only in the advanced stages.

Credit is given to Dr. Henry Bennett, of London, for the best exposition of the diagnosis of malignant disease of the cervix, and to Sir James Simpson for that when its primary seat is the mucous membrane of the body, and to Grailly Hewitt for that which is primarily interstitial in its seat.

The author observes: "In cases where vaginal examination fails to detect disease of the cervix, I regard hemorrhage, coming on spontaneously some years after the climacteric, as almost conclusive evidence of malignant disease, for I have never known polypi or fibrous tumors to bleed, for the first time, any considerable period after menstruation has ceased."

As to the duration of the disease, Prof. B. says his patients have almost invariably outlived his expectations as based on the statements of most authors. In 26 cases under his own observation the average duration was three years and six months. In one case the patient is still living although the diagnosis is unmistakable, the cervix gone, etc., although it was made out eleven years since.

Notwithstanding the despondent impression which the young practitioner is likely to get from the systematic treatises on gynæcology, the author assures the reader that much can be done in the way of palliation and prolongation of life. "We can certainly

improve nutrition, relieve pain, secure sleep, and arrest the offensive sanious discharges and hemorrhage, and thus notably prolong life and make it tolerable to the end."

For constitutional treatment the author first names arsenic: Three drops of Fowler's Solution to be taken always after eating. Next, he mentions the Missisquoi water of St. Albans, Vermont, but says none have gained relief from the bottled waters—they must take it at the Springs.

Dr. F. A. Burral treated a case, with apparent cure, of cancer of the breast, with external applications of carbolic acid and glycerine, and internally sulph. quinia and carbolic acid. A tablespoonful of the solution of sulphate of quinia, (four grains to the ounce of water) with three drops of the solution of carbolic acid (two drops being equivalent to one grain of the crystals) was taken three times a day.

Such cases, to Dr. B., are of weight in sustaining the opinion of Mr. Moore, that the disease has a local origin, developing secondarily a blood contamination.

Locally, he thinks the knife preferable to the *ecraseur*, but that the operation is not to be thought of if the disease exist above the vaginal attachment of the cervix, or involve the mucous membrane of the vagina, or where there is any evidence of its existence in any other part of the body.

As to cauterizations he has strong conviction that they are often very useful in arresting the ulcerative process; in diminishing the profuse discharges, and thus saving the strength of the patient; in correcting the fetor, and thus lessening the chances of septic absorption. At an early stage the progress of the disease is manifestly retarded by their use. He employs principally the actual cautery, the acid nitrate of mercury and the chromic acid. When the disease has not extended to adjacent organs the actual cautery is most frequently applied. The acid nitrate in cases where granulations sprouting from the interior of the cervix show a tendency to bleed. This agent involves a strong tendency to salivation in broken-down cachectic habits, and is therefore often objectionable.

In cauliflower excrescence, where the disease has extended beyond reach of the knife, he applies carefully, with a camel's hair brush, solution of chromic acid (100 grains to the ounce of water.)

Usually this application does not involve pain, but one case is given where, six hours after, the most intense suffering ensued, requiring the persistent use of chloroform. From the report of Dr. Prouth, of London, he is disposed to try, when a proper case is presented, the bromic solution recommended—Bromine, gr. v.—x. to fifty minims of spirits of wine.

Among palliative measures, Dr. B. makes the reasonable proposition that the fear of making the patient an habitual opium eater, ought not to deter from prescribing that potent anodyne in this fearful disease. Belladonna, hyoscy. and cannab. indic., etc., are comparatively inefficient. Hydrate of chloral in full (30 gr.) doses, at bedtime, gives one of his patients a night of blissful sleep instead of distress and suffering.

In those cases where there is extreme sensitiveness of the ulcerated surface, pessaries of iodoform are useful.

℞. Iodoform, - - - - - - - - - gr. x.
Butyri Cacao, - - - - - - - - - ʒ j.
Glycerine, - - - - - - - - - gtt. v.
M. One pessary.

This also serves to correct fetor. A drachm of iodoform to the ounce of lard is also a useful ointment. As lotions to correct the odor, etc., solutions of bromine, permanganate of potash and carbolic acid are recommended—these to be carefully introduced so as thoroughly to wash the affected surface.

Want of space and time prevents further notice of this valuable paper.

Braithwaite's Retrospect of Practical Medicine and Surgery. Part LXI. July. Uniform American Edition. New York: W. A. Townsend & Adams, publishers. 1870. Pp. 299.

The current No. of Braithwaite is one of rather more than usual excellence, and of course will be procured as soon as its issue is made known, by every physician who has the least desire to keep pace with the profession.

The Half Yearly Abstract of the Medical Sciences. Being a Digest of British and Continental Medicine, and of the Progress of Medicine and the Collateral Sciences. Edited by William Dometт Stone, M.D., F.R.C.S. (Exam.) vol. LI., July, 1870. Philadelphia: Henry C. Lea. Pp. 296.

Reform, Medicine and Morals, No. 3. An Address delivered before the Onondaga Medical Society, at Syracuse, N. Y., June 14, 1870. By J. A. Mowris, M.D.

A vehement attack on the utero vaginal specialty with all its paraphernalia of speculums, *porte caustiques*, pessaries, and gags. The writer characterizes this practice as the "speculoid" complaint, and charges the medical profession, by their indifference to it, as fostering one of the greatest medical absurdities of the age. We scissor a few paragraphs for specimens. Meanwhile we seriously apprehend the speaker has got himself into amazingly hot water.

"Basing a calculation on the *statements of the Uterine Specialists* as to the extent of their *trade* in a city of forty thousand, we discover in the uterus a susceptibility to derangement which may well astound the physiologist, alarm the friends of humanity, and impair veneration for Jehovah as the Maker of us all. The pretended revelations of the specialty teach that the "Great First Cause," in an attempt to create a harp of a thousand strings, exhausted itself on the last but one, and left the last to dangle at loose ends.

"But perhaps they proffer the convenient plea of 'new disease.' Very well. Nature then made a harp of a thousand strings, which went well enough for several thousand years, when with a revival of avarice, and the *advent of the speculum*, the harp fell hopelessly out of tune.

"The aggregate, *from the basis before mentioned*, is sufficient to supply *every woman in the city about three applications of the speculum per year*. Fifty per cent. of their number, six such operations; twenty-five per cent., twelve; twenty per cent., fifteen; ten per cent, thirty; and five per cent., *sixty operations*, which latter should certainly be enough to satisfy any speculator, and to cure the most obstinate case.

"We have thus disclosed to us an amazing prevalence of the 'peculiar' disease, or a remarkable number of patients undergoing a course of very diligent attention. Are all these really cases requiring treatment? Who believes it? Note the absurdity involved in the supposition. A like susceptibility to derangement in any *one* organ common to both sexes and all ages, would result, at once, in a grave popular calamity—an equal liability in *all* the other organs, would convert the world into a universal infirmary of helpless invalids.

Adam was the handiwork of God.
Was Eve the botch-work of a cobbler?

* * * * * *

"Since this specialty has been courted by physicians hitherto reputable, it has been found convenient or necessary to defend it with a cool assumption of '*professional superiority.*' Professional superiority! The claim being prompted by an emergency, rather than by sheer vanity, it should not be too severely resented, but still, it deserves not to escape scrutiny. This vaunted superiority must consist in tact or scientific knowledge. Can it be that this superior tact of which they boast is all displayed in the application of the instrument. *Further*, the accounts of the specialists' performances rest so entirely on interested testimony, as to be quite apocryphal. That the uterus has been made by the specialist the subject of remarkable skill, is not favored by the law of probabilities; for, in attempting to suppose it, we are confronted by the query, whether physicians who have always shown

a morbid solicitude to do their surgical skill where they may be seen of men, will be disposed to waste much of that precious commodity in secret."

But, positively, we dare not publish any more of this for fear that some of our friends will fancy they are our own sentiments, and their publication (facetiously) personal.

PAMPHLETS RECEIVED.

Transactions of the Indiana State Medical Society. 1870. Pp. 163. From the Secretary, G. V. WOOLEN, M.D., Indianapolis.

Report to the Faculty of the Med. Dep. of the University of Louisiana in Regard to the Convention of Medical Teachers lately held in Washington City.

The Physical Exploration of the Rectum: With an Appendix on the Ligation of Hæmorrhoidal Tumors. By WILLIAM BODENHAMER, A.M., M.D. Illustrated by numerous drawings. New York: Wm. Wood & Co., 61 Walker street. 1870. Pp. 54.

On the Origin of Diabetes, with some New Experiments Regarding the Glycogenic Functions of the Liver. By W. T. LUSK, M.D., Prof. Physiology L. I. Med. College. New York: D. Appleton & Co. 1870. Pp. 19.

Erotique Melancholy.

From a treatise by James Ferrard, Dr. of Physick, published at Oxford in 1640, we extract:

"The regimen, or order of diet, in cure of love melancholy, differs not at all from that that is to be observed in the prevention of it, save only that it ought to be somewhat more humectative and less refrigerative; not forgetting, in the meane time, those meats that by some certaine occult properties they have in them, are found to be very good for those that are sick of this disease; as the turtle-dove, the heart of a wolfe, young owles taken and boyled in the juyce of marioram, the flesh of rats, and the like. And if the party be fallen away in his body, and is now grown very thin and dry, you must then prescribe him the same order of diet, according to Avicen, as you doe to those that are hecticall."

Dr. Ferrard does not recommend traveling in the cure, for "as one of the seaven Grecian sages said, change of place neither takes away folly nor teaches a man wisdom." Which is applicable to some other travelers also.

Editorial.

The Apostolic Succession.

At the recent semi-annual meeting of the Minnesota State Med. Society, Dr. Solomon Blood expressed his regret

"That Dr. Stone chose the name which he did for the new journal. *The Chicago Medical Examiner* was first published under the same name, and I now have in my possession eight or ten volumes of the 'Northwestern Medical and Surgical Journal.' I have made hundreds of pages of references to the 'N. W. M. & S. Journal' in my note book, and wish that the name of this one might be changed."

We cordially agree with Dr. Blood in the desire that the name of our young but promising contemporary should be changed, for the same reasons which prompted our predecessors in the editorial conduct of this Journal to drop the cumbersome and inappropriate prefix Northwestern. St. Paul is no more, relatively, in the Northwest than Chicago was fifteen years since. The *Oregon Reporter* would have done better to take this designation than the one now used by several of its contemporaries, and it is in the Northwest. The prefix "Surgical" is obviously unnecessary. No one speaks of the Medical and Surgical profession, for the term Medical strictly embraces both, and the second prefix is mere tautology. But this is a matter of taste which, with the Minnesota Society, we refer to Dr. Stone—suggesting to him, however, that his contemporaries who will, of course, extract largely from his pages, would be pleased at relief from writing out the "Alexandrine" at the end of each of their scissorings. Just imagine the discomfort involved in quoting a passage from our Boston contemporary: "*The Journal of the Gynæcological Society of Boston.*" We positively omit many capital scissorings from that organ of the woman specialty, merely to avoid the manual labor of writing out its sesquipedalian title, and then invariably correcting the printer's proof which puts æ instead of æ every time. "What's in a name?" A great deal too much, very often.

But just now our object is to correct the misapprehension into which Dr. Blood has fallen. "*The Chicago Medical Examiner*"

was never published under the name "Northwestern Medical and Surgical Journal," but was started *ab initio* in 1859. It is not in the *succession*. This Journal is the legitimate and only successor and representative of the old "*Northwestern*," etc. etc. It is now in its twenty-seventh year, and, we are happy to say, in the most prosperous condition it has ever known. The present writer expects to continue in its editorial chair for the next quarter of a century of its career, or, at least, as long as it may be in his power to assist the cheerful monthly mentioned by Dr. Blood, in its appointed work of "elevating the profession" —by "blowing it up."

We have upon our shelves a complete file of the "Illinois M. & S. Journal," then the "Northwestern M. & S. J.," and since then the plain *Chicago Medical Journal*. We have its old mail books and ledgers, and, alas, its thousands of dollars of uncollected subscriptions, which our present publishers, fortunately for themselves, refused to have anything to do with, preferring the exclusively "cash-in-advance" system for the future. We will sell out the arrearages to any ambitious medical gentleman who wishes to start a new medical journal here or elsewhere.

To Correspondents.

We cannot undertake to write out opinions on cases presented from practice, for which we are frequently solicited, without the usual *honorarium*. But if such cases are reported in shape for publication in the *Journal*, we will reply through its pages, or ask our correspondents to do so. It has become necessary for us to make this announcement, because the matter of answering letters upon all conceivable (and some inconceivable) cases, has become burdensome to a degree which none but an editor can appreciate.

A Modern Miracle.

The *N. W. Christian Advocate* is responsible for the statement, (Aug. 10, 1870), that a few days since at the Oakington Camp Meeting, a Mr. Perkins of Cecil county, Md., who

"Had been laboring under a serious embarrassment of speech by stammering, which interfered with his usefulness, and he had entered into solemn covenant with God, that if He would restore to him his speech, he would solemnly engage to use his voice only

to the glory of God, and to speak for the honor of his Master, whenever opportunity occurred. While he prayed there seemed to come upon him a peculiar unction from on high and he fell prostrate on the ground, and when enabled to rise again he began to praise the Lord with a free tongue, and came into one of the experience meetings, testifying that God had healed him soul and body. On every occasion thereafter during the meeting he spoke to the glory of God and with much liberty."

The physiological suggestions from this case are obvious.

Dr. A. McFarland,

Late Superintendent of the State Hospital for the Insane at Jacksonville, presents himself in an able letter to the electors of Morgan county for a seat in the lower house in the next legislature. The reasons which impel him to the step are lucidly set forth, and, independently of politics, of which we know little and care less, we hope our Morgan county fellow-citizens will honor themselves by sending this high-minded, intelligent gentleman to represent them. Scarcely another man in the State is more competent to deal with the great interests involved in our eleemosynary institutions. It appears that an attack, intended in the first instance to be personally upon Dr. McF., in the event became the prime cause of placing upon the statute book of Illinois, one of the most atrocious pieces of legislation that ever disgraced a deliberative assembly. Practically, we know it to be oppressive and absurd in the last degree.

A brief extract from Dr. McF.'s letter sets forth the fact clearly, and we do not need to apologize for introducing it.

"Among the base measures used by an unscrupulous ring, was a simultaneous attack on all State interests of Jacksonville. The attack got an especial point as regards myself from the appearance on the stage, at this particular time, of an insane woman, whose rebuked free-love advances gave to her malignity all the venom proverbially attributed to the 'woman scorned.' Of all that followed for a year afterwards, at the cost, to the State, of many thousands of dollars, with no result except to enable an ambitious politician, of little capacity and less principle, to figure for his brief hour on the stage, I make no mention—the whole being too purely personal, and only touched upon here as prefatory of the particular matter I wish to introduce.

"Among the devices conceived to annoy and punish the individual particularly aimed at, was an enactment, speciously entitled: 'An Act for the Protection of Personal Liberty,' clearly intended as a stinging insult to the Superintendent of the State Hospital; imputing to him a disposition to commit a high crime against the liberty of the innocent unfortunate, and

appending the most degrading penalties known to the law for the offense. An act to prevent John Brown, of a particular city, street and number, from stealing sheep, could be no more justly offensive to the John Brown indicated than is this enactment to myself. But the personal affront, attempted in the passage of the act, bears no proportion whatever to the wide-spread and cruel wrong it has inflicted on the class it is ostensibly intended to benefit. Its first effect was to draw from the quiet of their apartments nearly all the inmates of the State Hospital, and subject them to the mockery of a new inquisition—a measure full of disaster, but for the rare good sense and discretion of a Morgan county court and jury. Since that period no individual in Illinois, whatever may have been the circumstances of sex, age, physical health or residence, who has needed treatment at the institution, but has had to pass the harsh ordeal laid down in this most singular statute. It converts every unfortunate insane person into a DEFENDANT IN A PROSECUTION, in which the dearest friends of the party are, in the necessity of the case, converted into apparent enemies. It often takes the invalid from the bed of sickness, to be transported, perhaps miles in an opposite direction from the institution, to a county seat, there to be adjudged by the ignorant hangers-on of a court house, who must hear, prior to th ir decision, the secrets of the family and the sick-room laid bare as the accidents of the case may determine. What should be decided by a county judge, in the privacy of his chambers, and upon the certificates of medical men, is made to depend upon the haphazard opinions and caprices of men grossly ignorant of the subject before them, the obvious effect of which frequently is to defeat the most kindly intentions of friends, and consign to hopeless insanity many whom a more ready access to the institution would have restored to reason and society. This enactment has met the derision, and received the protest of every philanthropic mind throughout the land. Persons of any sensibility who have the means, evade it by transporting insane friends to distant private institutions. Within a year, the ecclesiastical head of a great religious body, and also a member of the convention chosen to frame a new constitution for the State, have been carried out of the State rather than be submitted to so odious an inquisition. The imagined wrong it was pretendedly set up to correct, thus affords a pretext for a greater possible wrong, in this constant abduction."

Original Communications.

The completion of several valuable communications intended for the present No. has been prevented by the illness of the writers, of which we were not informed in season to obtain others. We have secured a corps of regular contributors that will usually keep our pages stocked with original matter.—All jokes, from whatever quarter, positively excluded. This out of deference to the American Mentor of medical journalism. However, that sufficient variety may be afforded to our readers, a reasonable latitude will be allowed correspondents. The use of calomel in *sedative* doses, bichromate of potash, and turpeth mineral in true croup, will not be considered infringing upon the rule against jokes.

News and Gossip.

Yale College records show that twenty-five per cent. of its students never marry. Prof. Loomis, of Harvard University, (*Oregon Med. Reporter*,) says also that the statistics of another of our first-class Universities show that five hundred and thirty-five graduates out of nine hundred and ten never marry. Prof. Loomis advances this startling statement: "Men who complete their professional education at or before twenty-one are, as a class, incompetent to perpetuate the race. They have sometimes one, may be two children, but seldom large families. The brain-work of collegiate life so completely deprives the individual of the vitality necessary for the proper development of the generative organs, that our most noted educated men are childless, or have but one or two children. Large portions of our present college students do not even desire married life, and those who do are not able to perpetuate the race." "Important, if true."

Dr. N. M. Logan, of Cincinnati, in a very excellent article in the *Lancet and Observer*, on the Pathology and Treatment of Tuberculosis, recommends to the profession nitric and muriatic acids in the treatment of pulmonary phthisis. Nitric acid he administers in doses of forty drops of the officinal dilution in a couple of ounces of water, immediately after each meal. The muriatic acid he prefers in the combination tr. ferri chloridi, giving this in thirty- or forty-drop doses, sufficiently diluted, half an hour before each meal. He does not expect to supersede by this treatment cod liver oil, suitable food, good hygiene, and other valuable and important measures, nor to remove the tuberculous diathesis, but commends it as having a great superiority over the most recent recognized therapeutics. He considers alcoholic stimulants as being worse than useless, except in cases of extreme exhaustion. A tabulated series of cases is given, sustaining his position. We are ready to indorse this use of the mineral acids, having been accustomed to employ them for this purpose, and inculcate their administration in our teachings at Rush and other medical colleges for many years. These acids furnish the best known succedanea for alchoholic stimulants in about all cases, with the inex-

pressible advantage that they do not involve the atrocious physical and moral results of habitual alcoholism. Alcohol *per se* has no relation to the cure of tuberculosis or typhoid fever, unless it invigorates nutrition and favors elimination. Neither it nor the mineral acids is a *specific* for these, or even snake bites. Nitric acid, in our experience, is preferable to any of the other mineral acids, both as being more agreeable to the stomach and more energetic in its subsequent influences. But if it does not energize the processes of digestion, repair and elimination in any given case, it will prove useless. The great remedial agencies in tuberculosis are no pitiful drops or magic mixtures, but an entire re-adjustment of all the influences which surround the individual. Mere medication in such cases is temporizing at the best. The patient of phthisical tendency must be warned in time, and, if necessary, put the width of the continent, or the earth's diameter, between him and the concurrent causes which are threatening his existence.

The State Med. Soc. of Ohio passed a resolution petitioning the Legislature to make it a penal offense for any persons but regularly educated physicians to perform the operation of vaccination.——Extreme mercurial treatment of constitutional syphilis is recommended by Prof. LEBERT; he directs suppositories of mercurial ointment, with butter of cocoa.——M. Mehu, Pharmacien of the Necker Hospital, commends this formula for a preservative fluid for specimens: Arsenious Acid, 20 parts; Cryst. Carbolic Acid, 10 parts; Alcohol, 300 parts; Distilled Water, 700 parts. ——A correspondent of the *Chicago Pharmacist* gives a "Quick way of extinguishing mercury." [Why did he not communicate it to an "Eclectic" paper?] He shakes a fluid dram of Tinct. Tolu, with three ounces of Mercury, in a strong two-ounce vial, whereby the fearful metal is readily reduced to a state of minute division, ready for admixture with fatty or other matters.——A correspondent of the *Philadelphia Reporter* has cured a case of "consumption" by excising an elongated uvula.——MR. HENRY LEE treats *nævi* by passing needles under the skin, and producing pressure by twisting above them India rubber threads. The pressure produces sloughing, and then the flaps are brought together, and union favored.——According to the J. G. S. B. the Massachusetts Medical Society proposes to expel from

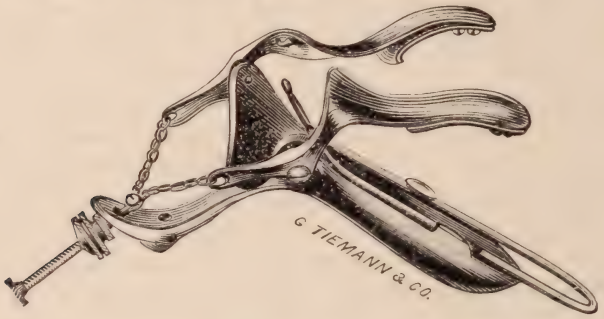
its membership habitual abortionists. —— Dr. Luther Parks has retired from the editorial chair of the B. M. & S. Journal which he has ably filled, and is succeeded by Francis H. Brown, M.D., editor, and H. H. A. Beach, associate editor. "Let us have peace."——Catheterism of the larnynx is recommended by Dr. Weinlechner, of Vienna, as a safe and rational resort in some cases which would otherwise require tracheotomy.——A nephew of the recent Sir James Simpson has been appointed to his vacant chair. Much feeling exists at the appointment, as many thought Dr. Duncan should have had the place.——Von Graeffe, the distinguished oculist, is dead.—— *The* Newton, whose miraculous cures in this country a few years since will be recollected as akin to the wondrous effects of homœopathic pellets and dilutions, had a brief season of prosperity in England, but this was followed by a sudden decadence of popularity, a mob and threatened lynching; he escaped only by acrobatic feats, which show that his accomplishments are not only spiritual but carnal.——Iodoform is gradually gaining upon the confidence of the profession as a local application to bad conditioned sores, etc. Its internal use is not largely chronicled. Won't somebody report cases enough of its use to start it on its travels?——In the use of Tannin as an antidode for Strychnia, from twenty to twenty-five parts of the former should be used for one of the latter.——Oil of Yellow Sandal Wood is the latest "sure cure" for blennorrhagia. —— The *Revue Therap.* gives several cases of relief of abdominal tympanites by puncture with a thin trochar. A neighbor of ours relieved a *cow* of similar trouble by stabbing her with a jack knife.——A correspondent of the *Philadelphia Reporter* records a case of fracture of the tibia from muscular contraction alone. The party was not colored. ——Poisoning with Veratrum is recommended in case of poisoning by Opium. In a case (from the *Reporter*) eighteen drops of Norwood's Tincture were given, in two ounces of brandy, to a person deeply narcotized by Opium, and "in an hour by the watch every symptom of Opium poisoning had disappeared.—— An English physician recently wrote the following prescription: R. Argenti Oxidi gr. xlviij, Morph. Muriat. gr. j, Ext. Gentianæ q. s. M. Make 24 pills and silver them. The lady for whom they were prescribed put the box in her bosom for safe keeping.

The heat of the part caused the compound to explode in about three-quarters of an hour, with resulting destruction of linens and laces, together with a severe burn of the breast. Our contemporaries are exercised at the idea of a similar gastric explosion.—— One part of Tannin in sixteen parts of Glycerine is to have dipped in it a bit of lint, and the lint is then to be introduced to the rectum in case of fissure of the anus. Van Holsbek says that he has thus cured fissures which resisted division of the sphincter. ——A new paper has been started in New York as the organ of superfine Positivism, which accepts as waymarks on the high road of progress the crudities and twaddle of Darwin, Spence, *et id omne genus*, believes in "humanity" as the true God, and "regards the worship of an unknowable God as a rank absurdity. Suggests marriages by contract, extending to two or five years only; thinks the old feudal custom of giving the lord of the manor the first privilege of every marriage among his retainers, was useful in improving the blood of the commoners; hints at the propriety of men who are incompetent to beget first class progeny, inviting men of superior strain of blood to the marriage bed; more than intimates that Pierrepont Edwards by his numberless adulteries and fornications did a good thing for Connecticut by distributing a good deal of the blood of his noble father, Jonathan Edwards; believes the 'Social Evil' by no means an unmixed evil, but likely to be ameliorated by polygamy or marriages of limitation," etc., etc., etc. All of which remind us of the old remark, that it is impossible to say anything so absurd but what has been advocated by some of the philosophers. And, again, the follies which astonish us in the medical world—infinitesimals, animal magnetism, womb burning, Newtonism, and hobby-riding in general—find their parallel in other fields of thought and study. When a man once permits himself to swing clear from common sense, there is no measuring the tangent or paradoxical curve he will describe. All healthful progress is achieved not by jumps or saltatory efforts of any kind, even in medical conventions, but by the slower and surer process of growth.

Loot.

Nott's Improved Speculum.

By the kindness of Messrs. Bliss & Sharp we are enabled to present an electrotype of this instrument for which the inventor claims the following advantages:



"1. No instrument hitherto devised can be more easy to introduce.

2. It can be equally well used in the semi-prone position or on the back.

3. While elevating or depressing the perineum, its feet are so constructed as to expand the *ostium vaginæ* to any desired extent.

4. It is perfectly self-retaining, without any arrangement external to the vagina.

5. In the semi-prone position it has the same advantage of atmospheric pressure as the lever speculum of Sims, and when the patient is on the back, by elevating the hips with a cushion or pillow, you have the same advantage of atmospheric pressure.

6. I use the instrument almost entirely with the patient on the back, because I can do everything I wish to do with more facility; and because the light from any window is more easily commanded. The concave surface of the speculum looking upwards, catches and throws the light fully on the anterior wall of the vagina and os uteri.

7. For all ordinary manipulations, where no cutting is required, instead of a table, any common bedstead or couch will command the light sufficiently from almost any window to give a good view. Baker Brown, in his operations for vesico-vaginal fistula, while using Sims' speculum, places the patient in the lithotomy position.

8. Like Sim's speculum, mine does not stretch the vagina *longitudinally*, and therefore allows the os uteri to be drawn down with a tenaculum near to the vulva.

9. The anterior wall of the vagina being left free, more space is afforded for operations.

10. With this speculum there are few operations that cannot be easily performed without an assistant.

I have also added, in some of the instruments, a small tenaculum, two inches long, with a little chain, any link of which may be made to catch on to a knob at the heel of the instrument. With a pair of forceps the tenaculum is fastened into the anterior lip of the uterus, and then drawn out and fixed at any point we desire.

I should remark that I have not yet tried this instrument in a case of vesico-vaginal fistula, and do not think it would answer well in any but small openings. By shortening the feet of the instrument, however, they would be out of the way, and the instrument would still be self-retaining. The feet need only be long enough to curve around the rami of the pubes, and thus not press upon or stretch the bladder; with this alteration I see no reason why it should not answer well for vesico-vaginal fistula."

Several of our friends who have tried it, think this the best speculum in use.

Is Syphilization to be Recommended for General Adoption?

We extract the following from an able article, by Freeman J. Bumstead, in the *American Journal of Medical Sciences:*

"In the preceding pages I have said much in favor of this method of treatment, and I have endeavored to give it its full credit. From what I have personally witnessed, and from the accounts of others, I believe that it is a very effective method for the treatment of syphilis. I cannot say that I am fully convinced of the very small number of relapses after 'syphilization' alleged by its advocates; not that I for a moment doubt their honesty, but results so favorable as this should be confirmed by others less enthusiastic, and less interested, before demanding implicit belief. Should further examination and experiment show that only twelve or fourteen persons out of every hundred infected with syphilis and treated by repeated inoculations, ever exhibit any return of the disease, this method will have established very high claims in the treatment of syphilis, whenever circumstances will permit its being carried out, as it may be in our hospitals and other eleemosynary institutions.

"But, judging from what I have seen of the practice, nothing less than a very strong probability, in case I myself had syphilis, that the disease, if left alone, or if treated by mercury, would terminate disastrously, could induce me to undergo the personal discomfort, and for the length of time, which I have witnessed in the patients at Charity Hospital.

"This *debit* side of the account, I cannot believe, is fully appreciated by the advocates of 'syphilization' in their enthusiasm for the *credit*. The former, in fact, is apparently not regarded by them as deserving of mention. Upon inquiry of Prof. Boeck, I am told that this plan of treatment is usually carried on without any interference with the patient's ordinary avocations; that the inconvenience is even so light, that a husband or a wife who has gone astray and contracted syphilis, may undergo this series of repeated inoculations extending over a period of three or four months, and yet be able to pass off the resulting pustules and ulcerations, covering the chest, arms and thighs, as common 'boils!'

"What I have seen of 'syphilization,' as practiced by Prof. Boeck himself, would make it appear a less agreeable process than the above statement would imply. To be sure, the treatment was new at Charity Hospital, and the patients were probably aware of the fact and more or less suspicious. Yet they kept their beds during the greater part of the three or four months that the inoculations were going on, although they had every inducement to be up and out upon the grounds; and it often required all our power of persuasion to lead them to consent to a continuance of the inoculations, so great was their discontent. Indeed, I never made a visit to the hospital without the fear that some of them had eloped, as actually happened in three instances. They represented that the soreness of the ulcerations was so great that they could scarcely endure the contact of the bedclothes, much less that of their daily dress, and the appearance of the sores corroborated their statement. I cannot well imagine how persons in their condition could have been about attending to their daily business. When they left the hospital they bore scars over the chest, arms and thighs, which they will doubtless carry with them to their graves. Moreover, the serious tendency of an ulcer upon the thigh, in the case of Benner, to take on phagedenic action, shows that this practice is not devoid of danger. In short, I feel obliged to subscribe to the opinion expressed by Messrs. Lane and Gascoyen, that 'syphilization is not a treatment which can be recommended for adoption.'"

Practically, the facts seem to be that patients will get better even when they are covered with sores from this absurd practice, provided the destructive medication which it supercedes is followed

also by generous fare and attention to the great requirements of physiological therapeutics. Nature will eliminate very successfully in the majority of instances; the poison itself is a sufficient stimulus of disintegration, and a wholesome, nutritious diet will energize both, and afford at the same time new and healthy tissue. The inoculation of the virus, fortunately, as a therapeutic, rarely produces sores serious enough to materially impede the case, when the proper rules of hygiene are observed.

A Simple, Cheap and Efficient Substitute for the Stomach Pump. By John T. Hodgen, M.D., Professor of Anatomy, St. Louis Medical College.

About a year ago, I had a case of stricture of the œsophagus so narrow that my patient could not swallow even liquids. To sustain life I resorted to a small stomach tube (a gum catheter, in fact), as a means of injecting liquid nourishment; to this I fixed the elastic tube of one of Davidson's syringes.

On one occasion the vessel containing the liquid happened to be higher than the patient's stomach, and I observed while the syringe was not being used, that the fluid continued to flow into the stomach—the action being that of a syphon. I at once, to test the syphon, substituted a simple elastic tube for the syringe, and found the stomach could be as readily emptied as filled. Thus I conceived the idea of using a syphon instead of a stomach pump, and have used the same in a case of poisoning recently with the most complete success.

I attach four feet of India rubber tubing to a stomach tube, fill both with water by simply dipping it in the liquid end first, then compressing the elastic tube between the thumb and finger to keep the fluid from running out, introduce the stomach tube, lower the outer end of the elastic tube, and the contents of the stomach pour out as readily as if from an open vessel. When the fluid ceases to flow, I dip the outer end of the tube beneath the surface of water, elevate the vessel containing it, and the stomach is soon filled; lower again the outer end of the tube, and the stomach is emptied. This can, of course, be repeated as often as is necessary.

The advantages claimed for this simple contrivance are, that it may be almost improvised, is of speedy and easy application, has no valves to become obstructed or deranged, and is less expensive than a stomach pump.

The same principle may be applied in injecting fluids into the bowels, as indeed it has been for injecting into the bladder, uterus and vagina.—*Saint Louis Medical and Surgical Journal.*

In the *American Medical Recorder*, July, 1823, p. 583, Dr. Alexander Somervail, of Essex Co., Virginia, thus discourses:

"Take a flexible tube of proper size, and four feet long, one end of which prepared for passing into the stomach, and the other terminating in a funnel. When this is introduced into the stomach, water may be poured into the funnel, while the tube is kept perpendicular its whole length; by which means the stomach may be filled as an hydrostatic bellows; when this is accomplished, and the funnel full, if this latter is quickly turned down, so as to remain as low as its length will allow, all the liquid will run out again, as it will then be converted into a syphon. In this way it is believed the stomach may be filled and emptied as often as water can be poured through the funnel and tube into it.

"Perhaps in some cases the force of the syringe may be necessary in order to agitate the contents of the stomach, and mix it with the water, but in case of laudanum and spirits, these will mix with the water as readily as they would in a glass."

Which should suggest to Prof. Hodgen that "there is nothing new under the sun"—except Hydrate of Chloral.

The stomach pump itself was practically introduced to the profession by Prof. Physick in 1800, although claimed over twenty years afterwards by an English surgeon, Jukes, as a new invention of his own. It appears, however, that the idea was suggested by Dr. Alexander Munro, Jr., of Edinburgh, in his inaugural thesis in 1797, a fact of which Prof. Physick was ignorant until many years afterwards, when Dr. Munro incidentally mentioned it in his book on Morbid Anatomy.

Hydrate of Chloral.

Mr. F. E. Clarke extols (*Lancet*, April 16, 1870,) chloral as a palliative in malignant diseases. He regards it as the best palliative in malignant disease. He regards it as the best palliative in cancer for alleviating pain, and by its beneficial effects it enables the constitution to hold out longer against the ravages of the disease, and "thereby afforded a much greater chance of spontaneous cure, rare instances of which occur by the sloughing of the entire mass."

Mr. Weeden Cooke, Surgeon to the Cancer Hospital, also bears strong testimony (*Lancet*, April 30, 1870) to the value of chloral for the relief of pain in cancer, and its superiority over other means hitherto employed for that purpose. As a night draught he has found twenty grains quite sufficient, but when the pain is persistent, ten-grain doses, three times a day, give the greatest satisfaction. There is no headache, no sickness, no loss of appetite, nothing to hinder the patient taking exercise, and, so far as the disease will permit, pursuing his usual vocation.

MATTOON, ILL., May 25, 1870.

Esculapian Society of the Wabash Valley met pursuant to adjournment; Dr. M. W. Wilcox, President.

The following members were present: Drs. Albin, Deming, Chambers, Johnson, Miller, Massie, St. Clair, Ringland, Swafford, Mosley, Steel, Pearman, Todd, Washburn, Willien, and Henry.

The minutes of the last meeting at Paris, Ill., were read and approved.

Dr. Willien's report on surgery was first in order, which was a paper occupying nearly an hour in its reading, and consisted of a statement of cases, and their treatment, together with many practical and original ideas. He made mention of the singular phenomenon, not usually observed, concerning the cessation of growth in the finger or toe-nails in cases of fracture of bones of the arms or legs; which fact it would be well to remember.

A case of irreducible strangulated brural hernia of right side. Kelotomy, and recovery.

Mrs. P——, resident of Effingham, Ill., aged 39 years, mother of five children, hernia of ten years standing, was suddenly taken sick, in July, 1869, with all the symptoms of strangulated hernia. All ordinary remedies failing, Drs. St. Clair, Lecrone, and he (the operator) decided to operate, as the only means of saving life. The symptoms were fast becoming more aggravated, vomiting of stercoraceous matter, etc., etc. 7th inst. Patient chloroformed. Tumor, size of large hen's egg, much inflamed, and very painful to the touch.

The operation was conducted after the usual manner, very little blood was lost; hernia reduced; wound closed with silk thread, ice applied in after dressing, opium internally.

Suppuration of wound on third day, a simple dressing then of carbolized glycerine and simple cerate. The bowels were moved freely on the seventh day by a dose of castor oil. Patient made an immediate recovery, and a radical cure was the result.

Next case was that of peri-uterine abscess. Supposed cause, perimetritis. Operation, and recovery.

Mrs. H. aged 27 years, mother of two children, in act of lifting a tub was seized with severe pain in back, followed by excessive uterine hemorrhage, with temporary loss of consciousness. She was four months gone in pregnancy, and miscarriage followed. The pain in back and sacro-lumbar region continued, with frequent stranguary and tenesmus of bowels. The preceding physician in the case (an irregular) had pronounced the cause of all the trouble a uterine polypus. When the patient desired its removal, he put her under the influence of chloroform and made traction on the neck of the womb; but, wearied out, he declared it would have to be removed by "escoratics." This course of treatment, fortunately, was never attempted.

Dr. Willien saw her first in Feb. 1869, after an illness of three years. Symptoms, face pale with expressions of anxiety, pulse weak and frequent,

chilling, at night cold and abundant perspiration, pain in abdomen and lower bowels, constipation.

On examination, a tumor, size of large infant's head, extending above the pubis about three inches; was painful, fluctuating, and slightly movable.

Exam. per vaginal. Cervix inclined to right, its posterior labia enlarged; os partly dilated and granulated, from which a sero-sanguinous fluid issued of a very offensive character. The uterus was lower in the vagina than normal; distinct fluctuation in cul de sac.

Per rectum exam. Tumor easily defined and fluctuation evident. Ques. Was it an intra-uterine disease involving its normal structure, a malignant growth, or a peri-uterine abscess? The introduction of the sound showed a declination to the left. The neck was dilated by tent sponge, and uterus found exempt from tumor or disease; he then concluded it to be an accumulation of fluid between the peritoneal covering and tissues proper; was it serous, blood or pus? The history of the case led him to think it pus.

March 30. Patient anesthetized, a small trocæ was plunged through the vaginal cul de sac and a rush of white inodorous pus, confirmed his diagnosis. An injection of carbolic acid and rain water was then used, narcotic poultices applied over the abdomen, and opium internally to relieve pain. Sulph. quinia and other tonics were freely administered. On fourth day, tumor began to enlarge again, although the discharge continued per vaginam. On examination per rectum, the pressure ruptured the membranes and a discharge of pus followed the finger. She now began to improve with a good appetite, and after a few months is again about her ordinary domestic work.

Third case was that of a fracture of the lower jaw in two places, by kick of horse; one spicula of bone protruding through into the mouth. The interesting part about this case was the application of a new splint (invented by himself) of vulcanized rubber, made to fit the jaw inside and externally. After six weeks the splints were removed with entire satisfaction.

Dr. Willien, at the close of his report, presented the Society with two new splints for the forearm and the leg; these, for their simplicity and cheapness, as well as their real merits, were generally approved. Any physician, living near a tinner, could have them readily made. A trough-like arrangement, with an expansion for the hand and a perforated septum for the arm or leg to rest on, through which all the superabundant water and effete materials could pass, thence off at one end. A complete dressing could be effected without any disturbance of the limb.

After the reading of this paper, it was discussed by Drs. Swafford, Massie, Chambers, and others.

Dr. Swafford thought the excessive use of cold water, by a large part of the profession, and as recommended by some medical authors, not a very commendable treatment; many times producing bad results.

Dr. Massie's report on midwifery was next in order. This document consisted of the doctor's own views and how he would conduct labor. It gave evidence of much experience and thought, was practical and original, written

for the benefit of the young men in the profession, and abounded in ideas not to be found in books. The part referring to ergot, elicited debate from some few members, advocates pro and con, as heretofore. The report was well received and was requested for publication.

The semi-annual address was delivered by Dr. Swafford of New Goshen, Ind., and was listened to attentively. It covered much of the history of the profession from 450 B. C. down to the merest charlatan or Indian doctor of the present, showing, with reason, why impostors did, and the regular profession did not, advertise.

May 26. Society met according to adjournment at 8 o'clock, A. M.

Dr. Chambers, of Charleston, Ill., reported a case. Mr. C——, farmer, age 40 years, June 1, 1869, was driving into his barn on a load of door-frames, was caught between the load and roof. Was carried from his barn to his house, a short distance. It was found, on examination, that the last dorsal vertebra was dislocated, one of the ribs on left side fractured, and lower extremities paralyzed. Patient was chloroformed, and extension made and the luxation reduced; one or two of the processes of the vertebra above were thought to be fractured; a compress, with bands around the waist, secured the vertebra in place. Morphine was given to relieve the pain; in a few days, bromide potass. was commenced and continued in large doses. Urine had to be drawn by catheter. In six weeks strychnia was given, but, not agreeing with the patient, nux vomica was substituted. This remedy seemed to fail, and an electric battery was used for some months.

May 21, 1870. Saw Mr. C—— to day, was sitting up in a rocking-chair, in which position he had been for some four hours. He weighed, when he received his injury, 160 pounds, was reduced in November last to 100 pounds, now weighs 125 pounds; he presents a healthy appearance, appetite sufficient, tongue clean, skin soft and warm to his toes; can now make partial flexion and extension of the left leg and slight motion with the right. Sensibility to the knee almost perfect; legs are proportionately smaller than his body; is nearly always admonished when it is necessary to urinate, yet cannot restrain it from passing; bowels rather torpid, thinks he can tell when he is going to have a passage, yet not always; has had, during the past winter, partial erections of the penis; pulse in sitting posture, 80 degrees, recumbent, 78; the case at this time is about "statu quo." It is interesting from the fact of its being the third on record. The doctor promised to keep watch over the case, and report to the Society in the fall as to its progress or condition. He then reported a case of gastrodynia as cured by sub. nit. bismuth.

A card was then read before the Society issued by one of its members: "Confidential Instructions given to the Married." "Dr. Davis has the only reliable and harmless preventive, (thereby interdicting the crime of abortion.) He also treats successfully all forms of private diseases, gonorrhœa, syphilis, leucorrhœa, painful menstruation, stricture, impotence, seminal weakness,

etc." Call at the ——, room No. —, or address, box 451, Des Moines, Iowa, with 2 three cent stamps for reply"

The following was written on card: "$25_{\frac{0\,0}{1\,0\,0}}$."

He was expelled by a unanimous vote of the Society.

The following gentlemen were assigned as essayists at the fall meeting:

Dr. A. J. Miller, Paris, Ill., on Baths. Dr. J. B. Hedges, Clinton, Ind., Obscure Mararial Diseases. Dr. J. F. Price, Charleston, Ill., Improvements in Therapeutic Agents. Dr B. F. Swafford, New Goshen, Ind., Wounds of the Knee Joint. Dr. H. H. Deming, Mattoon, Ill., Substitutes for Quinia. Dr. H. F. Harper, Marion, Ind., Best Manner of Building with a view to Ventilation. Dr. J. H. Apperson, Fillmore, Ill., the Sources of the Gastric Juice. Dr. J. R. Hinkle, Sullivan, Ind., Spinal Irritation.

The president then appointed the following gentlemen chairmen of standing committees:

Dr. G W. Albin, Neoga, Ill, Surgery. Dr. L L. Todd, Paris, Ill., Practical Medicine. Dr. Charles S. Johnson, New Goshen, Ind., Epidemics. Dr. E. B. Cannon, Tuscola, Ill., Midwifery. Dr. R. L. Walstons, Paris, Ill., Indigenous Botany.

Committee of Arrangements for next meeting: Drs. Apperson, Cannon, and Brinton.

Tuscola, Ill., was decided upon as the place for the fall meeting.

Dr. J. M. Hinkle, of Mattoon, Ill., brought up the question of paralysis, in connection with the building of the piers in the Mississippi river at St. Louis. The men having to work in a compressed atmosphere (under a pressure of about three atmospheres) were after a time (some in a few hours, others after a day or a week,) paralyzed. This led him to conclude that there was yet a frequent cause for this disease, not fully recognized by the profession. He thought if the external pressure exerted by the atmosphere was a cause of paralysis, as it seemed clearly to be in the above cases, then probably it acted conjointly with other common or recognized causes in everyday life, and his remedy would be to send such cases to more elevated localities, mountainous countries.

The time was so far gone that the debate on this question was cut short, and the Society adjourned to meet on the fourth Wednesday in October, 1870.

M. W. WILCOX, *Pres.*

WM. E. HENRY, *Sec.*

THE

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Original Communications.

ARTICLE I.—*The Cell Theories of Huxley and Virchow.* By I. N. DANFORTH, M.D., Chicago.

The student who reads the writings of Prof. T. H. Huxley will at once recognize the fact that he is in the presence of a *master* of terse and vigorous composition, as well as of clear, concise and cogent reasoning; but he will also find himself confronted by the stern necessity of turning his back upon this remarkable author, or else of bidding farewell to all our notions of bygone years regarding vital force. Mr. Huxley does not believe in vital force, as something superadded to, and working through, matter. He is, moreover, regarded as the "ablest English advocate" of Darwinism, particularly "with reference to its application to the human race, which he believes to be nearly related to the higher apes." His more recent views regarding "Protoplasm, or the Physical Basis of Life," are well known to the medical world, and his doctrines regarding the cell are quite consistent with the "physical" tendency of his faith and philosophy.

Mr. Huxley's first article on the cell, so far as I am aware, was published in the British and Foreign Medico-Chirurgical Review

for October, 1853. It was very widely read in England, and also to a very considerable extent in this country, but I think its conclusions found little favor on either side of the Atlantic, except that in England they were loudly trumpeted by the "advanced" school of philosophers whereof Mr. Huxley himself has now come to be the "Head Centre."

In this article, Mr. Huxley adopts to a considerable extent, and expounds at length, the doctrines of C. F. Wolff, first announced in the year 1759; thus rescuing this well-nigh forgotten author from the shades of impending oblivion.

Notwithstanding the intrinsic errors contained in Wolff's theory, it answered well as a sort of stepping-stone to the more recent notions of Huxley, and it is easy to trace the gradual growth of the former into the latter. To Wolff, the cell is a *passive*, not an *active* body; it is a mere cavity formed in and by the "blastema" or surrounding fluid; it possesses no organizing or developmental power, but is itself the visible result of the action of the organizing power inherent in the living mass, or what Wolff calls the *vis essentialis*. For him, however, this *vis essentialis* is no *archaeus*, but simply a convenient name for two facts which he takes much trouble to demonstrate: "the first, the existence in living tissues (before any passages are developed in them), of currents of the nutritious fluid determined to particular parts, by some power which is independent of all external influence; and the second, the peculiar changes of form and composition, which take place in the same manner." (Huxley.) Thus far we have the views of Wolff, as expounded and adopted by Mr. Huxley; and thus far we find the cell shorn of all essential power, and reduced to a mere passive body, which owes its existence to the *vis essentialis* resident in the blastema or fluid in which it floats, and of necessity holding its tenure of existence subject to the option of the same power; furthermore this *vis essentialis* is "simply a convenient name" for describing the visible phenomena which take place during the process of organization.

From this basis, Prof. Huxley goes on to complete his theory: *First*, "there is a condition of all kinds of living matter, in which it is an *amorphous germ*—that is, in which its external form depends merely on physical laws, and in which it possesses no internal structure,"—and, "according to the nature of certain previous

conditions," will be the future changes or differentiations which this "amorphous germ" shall undergo.

Secondly, the "morphological differentiation may be of two kinds." "In the lowest plants and animals," it is external—that is, concerning the outward shape of the germ, and having nothing to do with internal structure.

Thirdly, in all other plants and animals the germ "*becomes separated* into a certain central portion, which we have called the *endoplast*, and a peripheral portion, the *periplast*"—and the "germ in this state constitutes a vesicle with a central particle, or a nucleated cell." The molecular forces, or "*vis essentialis*," are not localized either in endoplast or periplast; there is no attraction or influence exercised by one over the other; the changes which each subsequently undergo, have no connection with each other, but each proceeds "in accordance with the general determining laws of the organism."

Fourthly, "The endoplast grows and divides," but generally "undergoes no other morphological change." "So far from being the centre of activity of the vital actions, it would appear much rather to be the *less important histological element*."

Fifthly, the *periplast* (cell-wall, contents, and intercellular substance) "is the subject of all the most important metamorphic processes, whether morphological or chemical, in the animal and plant. By its differentiation, every variety of tissue is produced; and this differentiation is the result, not of any metabolic action of the endoplast," but of molecular changes in its substance under the guiding force of the "*vis essentialis*."

Sixthly, the metamorphoses of the periplastic substance are two-fold—*chemical* and *structural*. The former relate to *conversion*, as of cellulose into xlyogen; or to *deposit*, as of silica in plants, and calcareous salts in animals. The structural metamorphoses are also two: *vacuolation* or the formation of cavities, as in the intercellular passages of plants, the first vascular canals in animals, and *fibrillation*.

So much for Mr. Huxley's doctrines in 1853. It is noticeable that, at this time, he admitted the existence of a guiding or organizing force—"the *vis essentialis* of Wolff, or the vital forces of the moderns," which, whatever he may have regarded its nature, was certainly to him something superior to and superadded to the

ordinary forces resident in matter. It will be seen that in this regard he has essentially modified his views since the date above-mentioned. In one particular, however, as Dr. Tyson has pointed out, Mr. Huxley has been misunderstood by some of his critics, especially Prof. Beale, namely, in that he has been represented as saying that the *periplast* is of itself active. If I correctly understand Mr. Huxley, he means that the *periplast* is *acted upon* by the *vis essentialis;* that it is the subject of action, rather than itself the active agent, and, in the light of Prof. Huxley's recent teachings, it is important that this matter be correctly understood.

It is scarcely necessary to enter into a lengthy explanation of the later views of Mr. Huxley, since they have been very generally read by the profession, and are readily accessible to everybody. Briefly, they are as follows: There is an albuminous matter, common to every form of life, whether plant or animal; this matter is "Protoplasm, or the Physical Basis of Life;" it "presents a three-fold unity—namely, a unity of power or faculty, a unity of form, and a unity of substantial composition," wherever and whenever found; this protoplasm or matter of life exists in the form of nucleated cells, variously modified as to form and size to fulfill various functions; plants can "manufacture" fresh protoplasm from its chemical elements, without limit, but animals must obtain it ready made, and hence, are dependent "in the long run" upon the vegetable world; the protoplasm of one animal may readily be converted or "transubstantiated" into that of any other animal, and this "fact speaks volumes for the general identity of that substance in all living beings."

But Mr. Huxley's views concerning vital action have been most widely and sharply criticised. According to him, there is no mysterious, essential power superadded to the ordinary chemical and molecular forces inherent in protoplasm, which we can call vitality. The phenomena exhibited by it are simply its properties, precisely as the phenomena of water are *its* properties, and we may as philosophically and as truthfully account for the properties of water by ascribing them to a mysterious power and call it "aquosity," as to account for the properties of protoplasm by ascribing them to a like mysterious power and call it "vitality." "What better philosophical status has 'vitality' than 'aquosity'?" asks Mr. Huxley—a question, by the way, which it is not difficult

to answer. These singular notions were announced in a public lecture in Edinburgh, in November, 1868. Although they have achieved a very wide circulation, they have found few adherents among scientific men, with the exception of the school of so-called "physicists," few in number, by whom they were of course joyfully welcomed. Nor is it probable that time and future investigations will render them more acceptable to the great body of scientists throughout the world.

Among modern observers and writers, no one has exerted a wider influence in the domain of cytology than Prof. Virchow, the eminent pathologist of Berlin. As I have already remarked, his views were, to a considerable extent, anticipated by that most excellent observer, Prof. John Goodsir; although it remained for Prof. Virchow to complete Goodsir's investigations, and place the results thereof in a systematic and accessible form; a work which is very fully and ably accomplished in his "Cellular Pathology," published in 1858.

The characteristic views of Virchow in regard to cell growth and cell action, seem to be but little known in this country, notwithstanding the fact that his book has met with a very extensive sale. I shall therefore attempt to state them briefly.

First, The cell is the only possible starting point for all vital processes, whether morbid or healthy; it is never developed, except from a pre-existing cell—or primarily from the ovum; hence *omne vivum ex ovo* becomes, in its broader signification, *omnis* cellula e cellulâ, and this is equally true of plants and animals; the cell consists essentially of "cell wall," "cell contents," and "nucleus"—the nucleolus not being considered essential. The nucleus is exclusively concerned in the *life* of the cell; upon it depends the maintenance of the present, and development of the future cell; while the cell contents (protoplasm of Huxley; formed material of Beale) are entirely concerned in *function*, as contraction, secretion, etc. With regard to "free cell development," it has, says Virchow, "been almost entirely abandoned, and in support of the correctness of which, not one fact can, with certainty, be adduced." (Cellular Pathology, page 36.) According to this view, the cell is the seat of all physiological and pathological processes, rather than the blood, or the nervous centres; hence the term "cellular pathology," in preference to humoral, neural or solidistic pathology.

Secondly, "Every animal presents itself as a sum of vital unities, every one of which manifests all the characteristics of life." * * * Hence there exists in the body "a kind of social arrangement of parts," wherein a number of "individual existences are mutually dependent, but in such a way that every element (cell) has its own special action. and, even though it derive its stimulus to activity from other parts, yet alone effects the actual performance of its duties." In following out this conception, Virchow "portions the body out into cell territories," or innumerable minute islets, which are conceivably tributary to, or are "ruled over" by a cell or cells adjacent. This is more particularly marked in some pathological new formations, consisting largely of intercellular substance, in which the boundaries of the cell districts are very "sharply defined."

Thirdly, The connective tissue corpuscle is not a nucleus alone, as originally stated by Schwann and others, but a complete cell (cell-wall, contents and nucleus); this cell is the starting point of all healthy and morbid growth, except such as may be attributed to epithelial origin; from the "proliferation of this cell, result pus, cancer, tubercle, the various tumors, and, indeed, all pathological new formations, with the exception above-mentioned. Hence these products are not exudations from the blood, but are of local origin—the result of increased or perverted cell-action, expressed by the word "proliferation."

Fourthly, The last and most doubtful feature of Virchow's theory relates to his peculiar system of canals or tubes, resulting from the anastomosis of cells. This is particularly the case with connective tissue cells, concerning which Virchow says, "It may with some degree of certainty be demonstrated, that these anastomoses constitute a peculiar system of tubes or canals which must be classed with the great canalicular system of the body, and which particularly, forming as they do, a supplement to the blood and lymphatic vessels, must be regarded as a new acquisition to our knowledge, and in some sort filling up the vacancy left by the old 'vasa serosa' which do not exist." This reticular arrangement is said to be "possible in cartilage, connective tissue, bone and mucous tissue in the most different parts." (Cellular Pathology, page 76.)

This system of tubuli is also believed to extend to and include

the tortuous fibres of the yellow elastic tissue, and the dentinal tubules. But the majority of observers have thus far failed to discover these anastomosing cells, and the resulting tubules, and the doctrine has not been received with general favor, even in Germany. It would seem that a point so important might be easily, speedily and conclusively settled; but it is extremely difficult, in microscopical investigations, to eliminate the various sources of optical delusion, and decide really what is true and what is false; and in this way, probably, either Virchow or his opponents have been grossly deceived.

Prof. L. S. Beale is a decided disbeliever in the existence of these tubules, and his statements are always entitled to great credence. But, considered in their entirety, the teachings of Virchow are vastly important in their relations to pathology. Whatever their ultimate value may prove to be as regards the establishment of new facts, and the enlargement of the bounds of our knowledge, this much is certain: the labors of Virchow have established a new order of things in regard to care and painstaking accuracy in prosecuting minute investigations; conclusions are less hastily jumped at; crude and silly theories are less frequently spawned upon the world; and the whole tendency of histological inquiry has changed for the better, in that more of care, more of accuracy and more of close and thoughtful study have been infused into the labors of observers everywhere, since the methodical writings of Virchow have become the common property of the profession.

ARTICLE II.— *Non-Ovarian Menstruation; with Cases, and Some Remarks upon the Ovulation Theory.* By A. REEVES JACKSON, M.D., Chicago, Ill.

It has long been known that in many febrile conditions, and under a variety of circumstances quite unconnected with menstruation, there may be a bloody discharge from the uterus, and Mr. Spencer Wells* has proposed to distinguish these discharges from menstruation by the terms "Uterine Epistaxis," or "Metrostaxis."

* *Medical Times and Gazette*, Vol. II, 1866.

Ovariotomists especially have observed, too, that within a few days, sometimes within a few hours, after the operation of ovariotomy, there appears a sanguineous discharge from the vulva, which has also commonly been referred to the same class of cases. Even in the instances where these latter have returned with a certain degree of regularity, physiologists have never regarded them as functional, and I believe that to Dr. H. R. Storer is due the credit of having first called attention to the physiological importance of phenomena of this character.*

In the following case a discharge of the kind alluded to continued after the removal of *both ovaries*, and yet by its periodical return and persistent character it seems to present a fair claim to be regarded as menstrual. I would not feel justified in attaching this kind of importance to the case, however clear and direct the evidence it furnishes, did it stand alone. But it is corroborated by a number of others, the details of some of which have been kindly given me by Drs. Baker Brown, Atlee, and Storer, and which are hereto appended.

Case I. Sarah T——, unmarried, aged forty-four years, commenced menstruating at the age of seventeen, and the process was always painlessly and regularly performed. August 31, 1865, I removed both ovaries, together with a portion of the Fallopian tubes.†

After her recovery, which was rapid and complete, she was frequently under my observation, being a resident of the same town. Some time during the year 1866 I learned that she had been menstruating regularly since the operation — a circumstance which surprised me very greatly, although my patient, an uneducated woman, was not aware that the fact was at all singular. On making close inquiry I was informed that a menstrual period ceased on the 30th of August, 1865. The operation was done in the afternoon of the following day. October 1, 1865, after an interval of thirty-one days, the discharge again appeared, and continued four days, attended by the usual symptoms of lassitude,

* *American Journal of the Medical Sciences*, January, 1868, p. 81.

† A detailed account of this case was published in the *American Journal of the Med. Sciences*, Vol. LII, p. 111, where, however, a typographical error makes the patient's age forty-seven

nervousness, backache, etc. There now occurred an interval of eighty-three days, the discharge reappearing December 22, 1865. Its next appearance was January 20, 1866—four weeks after—and from this last date it had continued to return with entire regularity, every twenty-eight or twenty-nine days, accompanied by all the ordinary symptoms of menstruation, and lasting each time from three to five days.

I now watched the case with much interest, and ascertained that the regularity above noted continued down to October, 1867, —a period of twenty-two months. It then ceased until February, 1868, when it appeared for the last time, the lady being then forty-seven years of age.

I may add that during all this time the patient's general health was excellent, and that I satisfied myself on several occasions that there was no disease of the uterus or vagina. Her voice has become harsher and more masculine, but otherwise there is no change discoverable.

I communicated the principal features of this case to Drs. W. L. Atlee, Spencer Wells, Charles Clay, Baker Brown, H. R. Storer and others, and was surprised to find that they had each met with similar ones, some of which I am permitted to refer to.

Case II. (W. L. Atlee.) "Mrs. J. C., aged thirty-six years, mother of six children. Menstruation always returned five months after parturition. Menstruated regularly the last time, March 20, 1854.

"April 17, 1854, both ovaries were removed at eleven o'clock, A. M. Menstruation returned the same evening.

"On the anniversary of the operation for several years, Mrs. C. regularly wrote to me, keeping me advised of her condition, always assuring me that the menses continued to return regularly.

"Dec. 5, 1867, I saw the patient. She informed me that up to May 1, 1864, she continued to menstruate as regularly as she had ever done. It then ceased. In May, 1865, she had a return, which was the last of it. Dec. 3, 1866, she was 48 years old.

"August 1, 1868, I called to see her while passing through B——, and noticed that she had a *shaved beard*."

Case III. (W. L. Atlee.) "Miss K. V., aged nineteen years, has menstruated regularly, accompanied with some dysmenorrhœa. Had a regular menstruation just four weeks ago. April 25, 1855, removed both ovaries.

"October 25, 1855, I saw the patient. She had just issued her wedding cards. She has had the regular monthly molimen as before the operation, and also a *monthly discharge*, but not stained with blood.

"She married, made a visit to Europe, and after her return I learned from her mother that the monthly discharge continued, and that she had the proper enjoyments of matrimonial life."

Dr. H. R. Storer, of Boston, has placed upon record three cases of double ovariotomy, and *in all of them* there was a subsequent reappearance of the menses.

Case IV. (H. R. Storer.*) "Sarah A. Colcord, aged 47, unmarried. The menses have always been normal, though somewhat scanty. Sept. 23, 1865, both ovaries and the whole of the uterus, except a small portion of the cervix, were removed.

"From the date of the operation until October 11, eighteen days subsequently, and twenty-six days after the last appearance of the catamenia, there was no discharge whatever from the vagina. Then there occurred a sanguineous effusion, attended by feelings of lassitude, backache, etc., etc., lasting thirty hours, and being an evident attempt at the re-establishment of menstruation; a very curious circumstance, and of great physiological interest, when it is recollected that the uterus and both ovaries had been removed."

Case V. (H. R. Storer.†) Mrs. Dunham, aged 43 years, the mother of six children. Menstruation had been regular down to within two months, and was now suppressed, as was supposed, by pregnancy. The symptoms became urgent, and Nov. 20, 1867, both ovaries were removed. "In the present instance the menses had been absent for two months, and yet reappeared subsequently to the operation, although the ovaries had both been removed, and the major part of the Fallopian tubes also."

* *American Journal of the Med. Sciences*, January, 1866, p. 110.

† *Canada Medical Journal.*

Case VI. (H. R. Storer.*) Mrs. Matthews. "The ovaries were entirely removed, and yet the patient has had, quite regularly, a sanguineous discharge, without evidence of uterine disease, and which hæmostatics, generally and locally applied, have failed to check or prevent."

Dr. Charles Clay, of Manchester, England, informs me (April 24, 1869,) that in about 220 cases of ovariotomy, he has performed double ovariotomy four times, and that in three of them he had noticed subsequent sanguineous discharge, which, however, he had never considered as menstrual, but attributed it to congestion of the lining membrane of the uterus. He adds, "I must confess the evidence in your case is remarkably strong, and if correct would entirely upset all the usual theories of menstruation."

Dr. I. Baker Brown, in a letter dated April 19, 1869, says, "I think I have had about five cases similar to your own in 148 cases of ovariotomy, but in some of them I could not *completely* remove *all* the disease."

Case VII. (Baker Brown.) "A little more than two years ago I operated on a young lady *extremely* reduced by ovarian (multilocular) dropsy, and removed both ovaries, and yet she has ever since menstruated, but not regularly—sometimes missing a few weeks."

Case VIII. (Baker Brown.) "The case on which I lay most stress was one on which I operated about ten years ago. I used the clamp externally, and the stump of the pedicle adhered to the parietes. At every subsequent epoch the skin broke, and she menstruated through the stump, and some through the vagina."

Le Fort also reports a case similar to that of Miss T., in the *Gazette Hebdomadaire.*

Koeberle records a case of this kind also, in which not only the ovaries but a large portion of the uterus were removed, *without interfering with the menstrual flux.*†

Notwithstanding the fact that the ovulation theory of menstrua-

* *American Journal of the Med. Sciences*, January, 1868.

† Liegois on the "Function of Reproduction," being part 1st of his "Traitè de Physiologie appliquè a la Medecine et a la Chirurgérie." Paris, 1869.

tion in the human female has been generally accepted by physiologists and accoucheurs as that which seemed most fully and satisfactorily to account for all the phenomena of that process, it is yet not unlikely that they may be obliged to modify their views in some important particulars.

Cazeaux, after considering the matter fully, says, "Having read all that has been written on the subject, the mind rests satisfied in its ability to refer this singular phenomenon to one unchangeable and easily verified fact, namely, the successive evolution of the Graafian vesicles.

"That the cause of the menstrual discharge is the evolution of a Graafian vesicle, would be an indisputable proposition, provided we were able to show—1st, That the examination of women who died during or shortly after the menstrual period had uniformly revealed the above-named changes; 2nd, That the absence of ovaries involved, of necessity, the absence of menstruation; 3rd, and lastly, That there is a complete analogy between the anatomical and physiological phenomena of the heat of animals and those which accompany menstruation (the menstrual flow) in the human female."

The observations and experiments of Coste, Negrier, Pouchet, Raciborski and others, which have been thought to prove the first of these points, cannot be considered as at all conclusive; and the statement made by Cazeaux that "no one has succeeded in instancing the case of a single woman who died at the menstrual period, whose ovary did not present a vesicle in a greater or less degree of development, or else one which had been already ruptured," may be admitted as entirely true, and yet cannot be taken as evidence of any necessary connection between ovulation and menstruation. For the researches of the elder Ritchie, confirmed more recently by those of the son,* demonstrate most clearly that Graafian vesicles, in successive stages of development, are to be found in the ovaries from early childhood to advanced age without having any connection with, or influence in determining, that process.

* Contributions to assist the Study of Physiology and Pathology. By Charles G. Ritchie, M.D., London, 1865.

The conclusions of Dr. Ritchie are so important in relation to this subject that I give them in full:

"1. The Fallopian tubes of the infant, and of the child before puberty, are perfect in their structure, although their patency is more or less obstructed at birth by the presence in them, and in the uterus, of a tenaceous, glue-colored mucus.

"2. The ovaries of new-born infants and children are occupied, sometimes numerously, by Graafian vesicles or ovisacs, which are highly vascular as early as the sixth year, and vary in size from the bulk of a coriander seed to that of a small raisin, in the fourteenth year, at which time, also, they are filled with their usual transparent granular fluid.

"3. The Graafian vesicles contained in the ovaries prior to menstruation are found, as they also are in every other period of life, in continual progression towards the circumference of the glands, which they penetrate, discharging themselves by circular-shaped capillary-sized pores or openings in the peritoneal coat; the presence of the catamenia being thus no indispensable prerequisite to their rupture.

"4. The establishment of menstruation does not necessarily give rise to any immediate modification in the manner in which the ovisacs are discharged, or in the subsequent change which these bodies undergo; but in some cases the conditions which obtain in the period before puberty, are extended for a time into that of menstruation.

"5. The ovisacs of the human female do not require the establishment or presence of menstruation for their development or rupture. Vesicles of adult size may exist and be discharged about the age of puberty, as also at other periods of life, independently of menstruation; and this state may be present in its normal form for at least eight consecutive periods without a vesicle being ruptured, unless after the manner and with the phenomena which occur in childhood.

"6. In early infancy, extreme old age, and long-continued organic disease, the ova are minute, transparent and structureless cells; and in advanced childhood, during the critical age, and during pregnancy and lactation, they are more or less organized, larger, and in the latter state are often so well matured, that about

one-third of the renewed pregnancies of married women take place while they nurse.

"7. In children and others in the circumstances now mentioned, the exercise of organic power which occasions the secretion and extrusion of ova, is attended also by that of an opaque mucus in the tubes and uterus; but on the attainment by the female of maturity, and onward to the period of critical life (when the animal powers become again diminished, and the calibre of the arteries reduced), the ovarian orgasm, like many other vital actions, undergoes periodical augmentations of power, during which, unless when prevented by the disturbing influence of other functional processes or by disease, it extends to the nervous and vascular tissues of the uterus, and gives rise to the formation within this viscus of decidual vessels, which exude lymph and red globules, the latter being evacuated, mixed with watery fluid, mucous matter, and some of the salts of the blood, in the form of menstruation.

"8. That the periodical congestion or increase in the size of the ovaries before and at the usual menstrual terms is not caused by the pressure or bursting of ripe vesicles, is plain from the consideration that the ovaries are often crowded with such, some of which also occasionally give way, and empty themselves by capillary-sized openings in the surface of the glands in women who have never menstruated; and in others who have ceased to menstruate, one and two large and fully-developed vesicles are frequently seen.

"9. The elimination of ova, and the process of menstruation, are correlative effects of the vital powers of the ovaries (just as the secretion of mucus and gastric juice, and the chymification of the blood, are those of the stomach); and to suppose the rupture of the Graafian vesicles to be the cause of the menses, is to mistake a frequent association, and, to some extent, effect, for a uniform cause.

"10. The principal use of menstruation is, in regard to the ovary, to provide an accessory by which the maturation of its vesicles, and the absorption of their peritoneal and tenacious proper coats, and their extension generally, may be promoted throughout the child-bearing period of life; and, in reference to the uterus, to furnish a nidus within its walls by which the ovum may be entangled, retained and nourished."

From all this it would seem clear that ovulation cannot be regarded either as the cause or effect of menstruation; and, furthermore, that however generally the two processes may accompany each other, this accompaniment is by no means constant or essential. And facts are not wanting to substantiate the correctness of these positions.

For example, Rondelet mentions the case of a woman who was delivered twelve times, and Joubert another, who bore eighteen children, neither of whom had ever menstruated.* And many instances have been related of girls who have become pregnant prior to the appearance of menstruation, and of others who have become so long after menstruation had ceased—all tending to show that ovulation may exist quite independently of the menstrual flow.

On the other hand, a case in which a discharge apparently identical with the menstrual fluid took place every fourteen days during three successive pregnancies, is given by Graily Hewitt in the *London Lancet* for July 24, 1858, p. 91.

Cazeaux admits that the menstrual flow may sometimes appear without necessarily implying the actual rupture of a matured Graafian vesicle, but he explains such cases on the ground that the matured vesicle, having established the menstrual movement, may remain stationary for some time, and finally abort without rupture.

It is needless to say that this explanation is entirely unsupported by facts. The extensive observations of M. Cazeaux have furnished him with undoubted evidence that the discharge of an ovule is not always necessary to the menstrual discharge, but, wedded to the theory that considers the vesicular evolution the only cause of the flow, he is forced to the assumption that in such cases the process has been half completed, half left undone.

But while many of the advocates of the ovulation theory are willing to admit that the ovule may maturate and even be discharged without the presence of the menstrual flow, they yet insist that when menstruation does occur we may feel entirely satisfied as to the existence of the vesicular development; that is to say, they deny that menstruation can occur except as an epiphenomenon of ovulation. And, hence, they argue, menstruation,

* Gardien, *Traitè d' Accouchements*, Vol I, p. 220.

although not a cause of fecundity, is yet a sign of it. But it is plain that if menstruation may occur in a woman who has no ovaries, it can no longer be regarded as a sure indication of fertility.

In order that I may not be misunderstood I wish to say that the cases of alleged menstruation occurring during pregnancy have never found favor with me. I have always thought that close investigation would reveal that the characteristic marks of natural menstruation had been for the most part absent; that the discharge had not returned with the usual regularity as to time; that it had not continued uninterruptedly the usual number of days; that it had differed in quantity and quality from the true menstrual fluid; and, lastly, that the discharge had not been accompanied by the feelings that are commonly experienced by females during normal menstruation.

It is quite true that when we consider the open state of the Fallopian tubes and the cervix uteri up to the second month of pregnancy, and the condition of the decidua vera and decidua reflexa, it is not difficult to understand that they may readily permit the menstrual discharge, in this early stage of pregnancy, being derived from its ordinary source, the lining membrane of the cavity of the uterus. This might be the source of the flow until the cavity of the uterus becomes completely occluded by the contact and coalescence of the decidua vera and reflexa which take place in the third month. The cervical plug of mucus is the only obstacle to its issuing from the uterus. But this is also present in the unimpregnated organ, and requires to be displaced or opened up for each ordinary menstrual period.

And now since we have seen that in some anomalous cases a small portion of the cervix uteri may be sufficient, as in the cases of Storer and Koeberle, to furnish a regular persistent discharge having all the characteristics of the normal menstrual flow, and attended by the usual accompaniments of the latter, we may not find so much difficulty as heretofore in comprehending how such discharge may continue throughout the entire period of utero-gestation.

The appeal to comparative physiology for the purpose of giving support to the ovulation theory is, I think, an unfortunate one. The œstrum of animals and menstruation in the human female are not completely analogous processes; there are indeed points of

essential difference between them. In the former the period marks the *only* time when the male will be received, and the only time when his approaches would be effectual. Whereas there has always been a feeling of repugnance to the sexual act on the part of man, and a delicate shrinking on the part of woman, during the menstrual period. It is well known that among the Jews, and likewise among nearly all eastern nations, sexual intercourse is prohibited at such times by their religion, for the reason that it is "uncleanness." It is also an admitted fact that although impregnation in the human female is much more likely to occur just before, or within a few days after, a menstrual period, yet it is possible at any time. So that although we may admit the intimate and even necessary connection between œstruation and ovulation in animals, it by no means follows that the same relation exists between ovulation and menstruation in woman.

If then it can be shown, 1st, That there is *no* necessary connection between the successive evolution and extrusion of ova and the phenomena of menstruation; 2d, That the absence of ovaries does *not* necessarily imply absence of the menstrual flow; 3rd, That the œstruation of animals is *not* identical with the catamenial discharge; and, 4th, That ovulation and menstruation may each exist without the other, *can* we continue to maintain the correctness of the ovulation theory? I do not mean to be understood as contending that these points are established; for I have no wish to claim more importance for the cases and facts which have been given than fairly belongs to them. But if we give credence to them at all, it seems to me that we must admit that the presence of the ovaries and the process of ovulation are are not the *only* things necessary to menstruation or the menstrual molimen; that the lining membrane of the cavity of the uterus is not the *only* source of the menstrual discharge; and that the "ovulation" theory must be either materially modified, or else discarded as not sufficient to account for all the phenomena.

1026 Wabash Ave.

ARTICLE III. — *Cases from the Surgical Clinic of Professor Moses Gunn, of Rush Medical College.* Reported by H. F. CHESBROUGH, M.D.*

I. Saturday, Dec. 10, 1869. L. S., of B——, Wisconsin, was brought before the class, by his physician, on account of a severe pain seated in the internal malleolus of the left leg. This young man had been unable to walk without crutches for about two years, and had applied to his physician to have his leg amputated, on account of the long continued and excessive pain. His attendant was unwilling to take the responsibility of amputating a limb which seemed perfectly sound to a casual observer, and so brought him to Chicago, to the College Clinic. Dr. Gunn spoke of the history of the case, comprising more than two years of severe persistent, paroxysmal pain, the tenderness on pressure, and the enlargement of the bone at that point, and pronounced the diagnosis of abscess of the bone. He then laid bare the tibia to a sufficient extent, trephined through the malleolus, and in the cancellar tissue of the bone, found an abscess the size of a hickory nut. It was full of well formed pus, which was distinctly visible on the sponge. The smooth walls of the abscess were also felt at bottom of the cavity made by the operation.

The wound was filled with lint and afterward with a wax plug, and allowed to fill up gradually, with granulations from the bottom. A letter was received some six weeks after from his attending physician, stating that the wound had run its natural course, had readily healed, and left the patient with a perfect recovery.

II. An old lady, aged 69, came from Wisconsin to get advice for a cancerous tumor of the breast. It was a scirrhus of large size, and was extirpated. The patient was very timid and the pulse weak and frequent, so that the æther had to be given with great caution. She was able to go home in a few days. * * Last week a letter was received from the husband, stating that the tumor began to grow in the cicatrix before the wound was entirely

* One reason for reporting these cases is, that the students who have seen the operations may know the results, thus adding much, not only to the interest, but also to the value of the clinic.

healed, and was now suppurating freely and very painful, and the patient in feeble health. This case then, as is so often the experience with scirrhus, was attended with only moderate success.

III. H. F., of Illinois, aged 18, presented himself on account of necrosis of the femur. He had contracted the disease while skating. The dead bone was taken away by cutting down upon it and removing it with forceps and chisel. The wound was filled with lint, and on the second day after the operation the plug of lint was removed, and one of wax, made to fit the wound perfectly, was put in its place. By this means the finger could be put into the wound, and the surgeon could feel, day by day, the progress of the case. After all the spiculæ of bone had ulcerated off, and the surface of exposed bone at the deepest part of the wound presented the smooth, velvety feel of healthy granulations, the patient was dismissed, and instructed to pare off a thin shaving from the end of the wax tent at every daily dressing. He was able to go home within ten days, with the certainty of a favorable result from the operation.

IV. On Jan. 22, 1870, came M. D., of Chicago, a young boy who had suffered from necrosis of the femur more than four years. His thigh presented the scars of dried up sinuses, and two openings, from which pus was still continually oozing. A small amount only of dead bone was removed, and the wound was kept open with a wax tent till early in March. Then the last piece of dead bone which could be felt by the finger came away, and the plug was gradually curtailed of its dimensions. Since then the sinuses have gradually closed, and the leg is perfectly healed.

V. C. S., with necrosis of the tibia, presented himself for an operation. He was treated as the others, and was perfectly cured in two months.

VI. On the 12th of Feb., 1870, B. R., of Chicago, an ill-conditioned, pale boy, appeared at the clinic, with extensive necrosis of the left femur. At the operation several small pieces of dead bone, and one large piece, two and a half inches long, very jagged and irregular, were removed. The cut was made between the

inner hamstring muscles and the vastus internus, at the lower and inner part of the thigh. Of course the fibres of the latter muscle were partly divided. On account of the femoral artery the incision could not be carried upward along the femur, as far as the necrosis extended. Therefore a piece of wax was shaped to correspond with the shape and size of an index finger, bent at a right angle at the second joint, and this plug was inserted into the wound after suppuration had been established by the introduction of lint. At this time a jagged piece of dead bone could be felt at the deepest part of the incision, which evidently extended up the shaft of the femur. In about three weeks this piece could be felt coming down gradually, and the wax tent was cut off occasionally to accommodate the descent of the bone, until on the 30th day of April, eleven weeks after the operation, it became loose enough to remove with the forceps, and, when brought to light, proved to be even larger than the first piece. After this the wound was allowed to granulate rapidly from the bottom, and at the present writing, the lad is looking much improved, and the leg is perfectly sound.

On the text of these four cases, Prof. Gunn made a few remarks. He said that early in his practice he would operate for necrosis and employ the recognized after-treatment of filling the incision with lint and keeping the wound open as long as possible, to allow all the dead bone present to exfoliate and pass off. Yet with all the precautions possible it happened to him several times to have to cut a second time down on the same diseased bone. This led him to search for some remedy to obviate the disagreeable necessity of operating twice on the same case, and the wax plug was hit upon. Thus with its use in this case (VI,) the wound was kept open eleven weeks, until the second large fragment was pulled out, and then, by being gradually cut away at its distal end, it permits the wound to fill up from the bottom by granulations, and the gradual healing leaves a solid and perfect scar. The Professor added that after adopting this after-treatment in necrosis, it had never occurred to him to be forced to repeat the operation in the same case. In case III, the bottom of the wound was plainly felt by the finger, within ten days from the operation, to be covered by soft, smooth granulations, and then it was known that it was perfectly safe to

let the patient go home. In case IV, the wound was kept open six weeks, while a few sharp points and small pieces of bone came away, the largest of which was about the size of a split pea. These pieces, insignificant as they seem, if they had not had a free passage kept open for them, could, and in all probability would, have caused a recurrence of those discharging sinuses, so diagnostic of necrosis.

In the case of C. S., (V,) the necrosis was superficial, on the anterior border of the tibia, and at first it was not deemed necessary to use the wax tent, but after three weeks the lint caused so much inflammation around the wound, that it was changed for the wax. At the next clinic a great improvement was visible, the inflammation and tenderness had nearly subsided, and in a month more the last spicula and flake of dead bone had exfoliated, and the patient was discharged cured. This case was remarkable chiefly on account of the large extent of superficial ulceration as compared with the small amount of bone disease. Again, another fact worthy of remark is, that they are so often caused by skating. A young man skates for several hours on a very cold day, comes home chilled through, and goes through the familiar history of necrosis. All of these cases are young men or boys, and three of the four contracted the disease by skating.

VII. A sailor, middle aged, married early in life, and strictly virtuous (he said,) presented himself on May 21st, to be relieved of stricture of the urethra. He had been hit, some eight months previously, by a boom, on the upper and inner part of the thigh and perineum, and very soon after experienced difficulty in passing his urine. It was impossible to pass a moderate-sized sound. The patient was put profoundly under the influence of æther and after much time and manipulation the point of a Holt's dilator was made to engage in the contracted canal of the urethra, after the lacunæ and culs-de-sac had been filled by the ends of fine flexible bougies. It was then pushed into the bladder, and the stricture forcibly dilated. Then a set of Van Buren's conical pointed sounds were passed into the bladder, beginning at four and ending at ten. He was cared for every day till a number sixteen was passed. But nature not having manufactured the orifice of his urethra with due reference to the size of a number

sixteen sound, he was put back to a number twelve. This he was taught to use himself, and on June 4th, he introduced it into his bladder before the class, and with perfect impunity to his meatus urinarius. He expressed his delight and surprise at the ease and copiousness of micturition after the dilatation.

VIII. June 11, 1870, a weak, sickly boy, aged 15, residing on Market street, was brought before the class, to be relieved of traumatic stricture. One stricture was found immediately behind the meatus, and was first forcibly dilated by Holt's dilator, and then by the sound. Then a second stricture was found in the membranous portion of the urethra, and was treated in the same way as the first. The boy's development was very small for his age, so that a number four sound was considered as large as it was best to pass in his case. On reaching the bladder the sound gave distinct and audible evidence to the class that the two strictures were further complicated by the existence of a vesical calculus. The lad was sent home to prepare for the operation of lithotomy. On the 18th of June he again presented himself at the clinic. The lateral operation was made, but the stone repeatedly crumbled and slipped off in the attempts to remove it with the forceps. At last the nucleus, with a portion of the surrounding concretion, was withdrawn, and a large quantity of fungus, thickly studded with the same concretion as the main calculus, was scraped from the walls of the bladder. The calculus was also attached to the upper vesical wall. The patient made a good recovery, passing from time to time shreds of fungus similar to those scraped from the bladder during the operation. This patient will, probably, appear again for further treatment of the strictures.

ARTICLE IV. — *Scorbutic Dysentery.* By J. E. THORNBURGH, M.D., Lynnville, Indiana.

Isaac L., aged nineteen years, American, was attacked July, 1869, with acute dysentery, which terminated finally in chronic dysentery. Previous to this attack, his habits had not been regu-

lar. He was intemperate, and drank great quantities of inferior whisky. He used a great amount of tobacco.

Saccharine articles were his principal diet. His digestion had not been good for several years, and he had had numerous attacks of acute dyspepsia. Several physicians had treated him for the chronic dysentery, all unsuccessfully. He came under my observation in March, 1870. He was extremely emaciated, with a marked sallowness of skin and slight œdema of lower extremities. His gums were in a terrible condition, bleeding profusely almost every day, very spongy, and teeth loose. The breath was very fetid. Ecchymoses numerous on lower extremities, chiefly in the form of petechiæ. The urine was very highly colored, having the appearance of containing blood. On examination none was found, but there was great abundance of the urates.

The discharges from the bowels were peculiarly offensive, and contained an abundance of mucus, and occasionally a small quantity of blood. Ulcerations extended to the extreme outer edge of the anus, causing severe pain on defecation.

Physical examination elicited slight tenderness over the greater part of the abdomen. The liver was very much atrophied and irregular.

March 12th, I placed him under the treatment usually employed in scorbutics, with wine. On the 14th of same month a profuse hemorrhage from the gums occurred, which astringents would not arrest. The Per Sulphate of Iron would arrest it for a few minutes only. I gave him some lemon juice to rinse his mouth with, and the hemorrhage immediately stopped. No more severe hemorrhages occurred after that time. The scorbutic symptoms gradually disappeared, with the exception of pains in his lower extremities, which still persisted and were sometimes very severe.

The treatment for the chronic dysentery was not so successful. Sub-nitrate of Bismuth, combined with Nitrate of Silver, appeared to give more benefit than any other remedies. The discharges became less frequent and more natural under the above remedies, and the patient recovered gradually, till the 18th of May, when he became suddenly worse. The discharges became very frequent, and were mixed with blood and pus.

May 20th, the patient became comatose, and, on the morning of the 21st, died.

There were no positive symptoms of peritonitis.

Was the diagnosis of scorbutic dysentery correct? If so, what caused the scorbutic element in the disease? What caused the atrophy of the liver?

ARTICLE V. — *Case of Fracture of the Spine. Patient surviving seventy-two days.* By DAN'L T. NELSON, Prof. Physiology, etc., Chicago Medical College.

June 12, 1869—Was called to see T. M. who had just fallen from near the third floor of a dwelling house in process of erection, through an open stairway to the first floor, striking the second floor in his descent.

The only injuries to indicate the direction of the fall was a slight bruise over the superior border of the occipital bone, and on the left thigh, neither of which were severe, as he evidently struck smooth surfaces—floors or timbers.

The patient complained of pain in all of the extremities, but most in the cervical region of the spine. All power of motion was lost except in the cervical region and above, and here it was prevented by the excessive pain produced.

A careful examination of the spine, in bed, revealed, at the seat of the greatest pain, a separation of the spinous processes of the first and second dorsal vertebræ to about three times their normal distance. No fracture could be detected. This was the only injury noticed, except the bruises referred to above. Below the point of injury there was complete paralysis and loss of sensibility except the pain referred to the extremities.

The patient was an Irish laborer, 23 years of age, muscular, full fleshed, five feet eight inches high, weighing about 150 lbs., and apparently in perfect health at the time of the accident. Prof. N. S. Davis also saw the patient the day of the accident.

On the day of the injury the only medicine given was a mixture containing Morphine and Belladonna to relieve the pain. The

attendants were directed to keep the patient all of the time on his sides or chest, and not on the back, to give the injured parts the benefit of gravity.

2nd day. Pulse, 74; respiration, 17. Some delirium, but slept the most of the night.

3rd day. Pulse, 62; respiration, 16. No fever; no delirium.

4th day. Pulse, 65; respiration, 17. Considerable œdema of left arm after lying on that side a part of the night. Slept well.

6th day. Œdema left arm, same. Has not lain on it since 4th day. Pulse, 72; respiration, 18. Pulse fuller, and temperature of skin increased; face flushed—some fever. Tr. Veratrum Viride given until nausea produced; then stopped.

7th to 12th day. Pulse, 60—68; respiration, 16, 17. No Veratrum given, but instead—

℞. Tr. Digitalis, - - - - - - - - - ℥ j.
Fluid Ext. Ergot, - - - - - - - - - ℥ jv.
Syr. Simplicis, - - - - - - - - - ℥ jss.
Tr. Aurantii Cort., - - - - - - - - ℥ ij.
M. Teaspoonful every six hours.

12th day. Tongue begins to be furred for the first time since the accident. Bowels only move by the assistance of laxatives. Urine, normal in quantity and appearance, acid, and has been so from the first. Drawn every eight hours; appetite good; digestion well performed.

13th to 20th day. Pulse 65—78; respiration, 16—19. Left arm still swollen, but not as much as on 4th day. Tongue only slightly furred; bowels moved almost daily by laxatives or enemas; fæces normal; urine normal; appetite good. Food used daily, since the 7th day, five to six eggs, beef tea from two lbs. beef, bread and butter, tea and fruit; digestion well performed; fever ephemeral, only lasting a few minutes.

Since the 13th day, the following mixture has been given instead of the Digitalis and Ergot of the 7th day:

℞ Fluid Ext. Belladonnæ, - - - - - - - - ℥ j.
Syr. Simplicis, } - - - - - - - - - āā ℥ ss.
Aq. Puræ, }
M. Teaspoonful every four hours.

21st day. Had a chill from no assignable cause, fever followed.

22nd day. Pulse, 90; respiration, 23; not labored. Belladonna stopped, and a mixture containing in each dram Hydrarg. Chlor. Corros. gr. 1-16, and Tr. Cinchona ʒj. Teaspoonful every eight hours.

23rd day. Had a sinking spell.

24th day. The œdema which has never left the arm, began to show itself in the walls of the chest and lower limb of the left side.

26th day. On the suggestion of Dr. Walter Hay who saw the patient in consultation, the Bromide of Mercury was given instead of the Bichloride, with the hope of better quieting the muscular spasms in the limbs and the parts below the seat of injury, which produced pain referred to the seat of injury and above.

℞. Hydrarg. Bromid. - - - - - - - gr. ij.
Sacch. Albi, - - - - - - - - - ʒ j.

M. Ft. chart. No. viij. One powder every eight hours.

30th day. Œdema increasing, both lower extremities swollen. Has invaded left lung and the lower and posterior portion of right, so as to interfere very considerably with respiration. The patient was kept upon the sides and anterior portion of the body during the first ten days, but afterwards, for fear of bedsores and to gratify the patient, he was allowed to lie a part of the time upon the back, but later he was compelled to lie upon the left side with the head considerably raised, on account of the œdema of the left lung and lower lobe of the right.

At the suggestion of Dr. Hay, the Bromide of Mercury was omitted and the Bromide of Iron given instead, as the gums were getting tender and a red line forming next the teeth; the tongue also was red and tender, and the epithelium thinned. Appetite not so good. Urine purulent for the first time since the accident.*

℞. Ferri Bromid., - - - - - - - - ʒ j.
Syr. Simplicis, } - - - - - - - āā ʒ ij.
Aq. Puræ, }

M. Teaspoonful every six hours.

* Urine, immediately after being drawn, was found to contain numerous *bacteria*, which, after repeated investigations, were traced to the atmosphere, and to partially desiccated pools of stagnant water in the street gutters. W. H.

Strychnia was also given, with the hope of stimulating the nerves and reducing the œdema.

℞. Strychniæ, - - - - - - - - - gr. j.
Tr. Aurantii Cort., - - - - - - - - ʒ ij.
Syr. Symplicis, } - - - - - - āā ʒ vij.
Aq. Font., }

M. Teaspoonful every six hours.

31st day. Take Strychnia every four hours, unless spasms in limbs return.

32nd day. Appetite better; œdema less; urine abundant—two quarts in eighteen hours.

33rd day. Pulse, 90; tongue dry; skin dry; heat increased; appetite poor.

34th day. Pulse, 84; tongue dry, but cleaner.

35th to 38th day. Pulse, 80—76; tongue clean; appetite improving.

39th day. Tongue clean; appetite good; bowels moved of themselves for the first time since injury. Give strychnia every eight hours.

41st day. Capillary circulation of nose and right cheek impeded; spasms of muscles of mastication, producing much pain; quieted by local pressure of hands of attendants. Intellect dull.

42nd day. Strychnia omitted; hyperæsthesia left ear and cheek following the course of the facial nerve—not the *fifth;* spasmodic contraction of muscles of face left side; also of shoulders and abdomen. Pulse, 78; respiration, 19; urine, two quarts; has been abundant since 31st day. Œdema much lessened; respiration easy; line of sensation three inches above right nipple, four inches above on left side of arm to insertion of deltoid anteriorly, not so low on posterior portion, and thence to lower border of scapula. No record of the exact line of sensation was before made, but it had not perceptibly changed since the accident. From the time of the accident until the muscular spasms on the 41st day, there had been hyperæsthesia along the line of sensation above, extending as high as the lower jaw and nearly to the ear, but not reaching it. After the spasms of these muscles the zone of hyperæsthesia passed upward to include the portions of the face below the eyes, the nose, cheeks and ear, leaving the zone below with nearly nor-

mal sensibility. The spasms and hyperæsthesia were at first confined to left side, but on the

43rd day the right side also suffered. The hyperæsthesia rendered the muscular spasms almost unendurable. Reflex muscular contractions easily produced in legs on touching them, as in placing a bottle to catch urine. Bedsores clean and healthy, very little discharge. (Have no note of the time when they began, but it was about the 20th day when the sloughs began to show signs of forming. They were kept constantly bathed with a strong solution of Permaganate of Potash, so that there was no odor of decomposing pus in the room, although the weather the most of the time was very warm (July and August.) Muscles of mastication left stiff by spasms; cannot open mouth; sordes begin to collect on teeth; urine, two and a half quarts; pulse, 78, full and strong; respiration, 20.

The dissection made by the bedsores along the spine revealed a fracture of the 7th dorsal vertebra, not before discovered; all the symptoms and the complaints of the patient had directed attention to the injury higher up.

44th day. Pulse, 84; respiration, 19; urine two quarts, and passed for the first time involuntarily but without the catheter; does not dribble but all passed at once after the bladder has become moderately filled; does not feel the urine flowing, but does the *fæces;* refers the sensation to the seat of injury in the neck. Urine began to be purulent on the 30th day, and amount of pus increased until about the 40th day, when it had reached some two ounces in quantity, after which it gradually decreased but rarely was entirely absent until death.

46th day. Pulse, 94; respiration, 27. Feet cold most of the time. Bedsores healthy, and filling up.

48th day. Line of sensation as low as cartilages of lower ribs and ensiform cartilage, right leg almost to toes, both legs to knees, right arm to elbow, left nearly to elbow.

(Can hardly believe now, that sensation did return in lower extremities, but had no doubt of it at the time the record was made.) Feel sure there was no mistake about the extension of sensibility in the chest and arms, as this was observed by Dr. Hay also. Bowels moved of themselves; urine, two quarts. Pulse, 72; respiration, 18.

49th day. Sensation to knees and elbows; urine, two quarts.

50th day. Pulse, 90; respiration, 19; sensation not as low; sleepy; intellect dull; skin hot; delirium for a few minutes; face flushed during delirium; œdema, which has never been entirely absent, is increasing again.

51st day. Dr. Hay, who lives near, was called in last evening. Found pulse, 120; respiration, 36, and difficult; œdema much increased; both lungs dull; mucous rales; respiratory murmur only heard in front above the nipples.

Dr. H. increased the Strychnia, which had been nearly suspended of late—entirely while the spasm of the muscles of mastication had been so troublesome—to gr. 1-16, every four hours, until three doses were taken, and then every six hours.

In the morning, pulse, 102; respiration, 27*; less labored. Continue Strychnia unless spasm of muscles increased.

52nd day. Sensation to second rib and middle of deltoid. Pulse, 102; respiration, 23; slept half of night; urine, two quarts. Œdema decreasing.

53rd day. Pulse, 90; respiration, 24. Hyperæsthesia, lower boundary, the clavicles. Œdema decreasing.

56th day. Pulse, 105; respiration, 27; œdema lower limbs, increasing. Urine alkaline for the first time.

58th day. Hyperæsthesia near clavicles, less. Capillary circulation in cheeks, sluggish.

63d day. Pulse 90; respiration easy. Abscess in left thigh broke and discharged one quart of pus and sanies; femur exposed six inches.

64th day. Pulse, 90; respiration, 34, labored.

68th day. Abscess in left arm burst; said to have discharged more than the one in the thigh; mostly a sanious fluid, like pure juice, or like pus and pure juice mingled. Urine dribbles away; bowels loose.

72nd day. Urine, two quarts. No marked change, though gradually failing; and on the 73d day died.

All the muscles of the left side seemed to be different, much as if putrefaction had already considerably advanced. No autopsy could be obtained on account of the objections of friends.

* Pulse, 96; respiration, 24. W. H.

Remarks.—We notice, as peculiarities of the case:

1st. The unusual length of time which the patient lived after an injury so high up.

2nd. The slight variation of the pulse and respiration from the normal standard up to the 51st day, when fluids in the lungs had so accumulated as to readily account for their rapidity.

3rd. The long time which the urine remained normal in its reaction, not being alkaline until the 56th day, although pus began to appear as early as the 30th day.

4th. The ease with which digestion and assimilation are performed; showing the possibility of the performance of these functions without the aid of the spinal cord or its nerves below the cervical.

5th. The physiological action of Strychnia in reducing the œdema and increasing the urine, as seen by its exhibition in decided doses on the 30th and following days, and on the 51st and subsequent days.

6th. The good effect of Permang. Potash in preventing profuse suppuration of the bedsores, and keeping away all disagreeable odors, although in the midst of summer.

7th. The location of the line of sensibility as noted on the 42nd day, remembering the anatomical distribution of the nerves in this region, and their origin.

Of the accuracy of the observations there can be no doubt, as it was noticed by Prof. J. A. Allen and Moses Gunn, at different times, and by Dr. Hay and myself at a number of examinations.

8th. The change in the zone of hyperæsthesia, noted on the 41st and 43rd days, and its return to its lower position, as noted on the 53rd day.

May we suppose there was an effusion of fluid into the spinal canal or within the membranes of the cord, which from its pressure destroyed the function of the posterior columns and thus verified the experiments of Brown-Sequard, (see Physiol. and Pathol. Nervous Centres, pp. 19 et seq.) and that the amount of this fluid increased and thus changed the position of this zone as noted?

9th. The extension of sensibility, as noted the 48th day.

May we suppose the real seat of injury to the cord itself was only at the fracture discovered the 43rd day, and the fluids effused

from their pressure destroyed the functions of the cord as high as the cervical region, and then, there being a partial absorption of this fluid, the function of the cord partially returns, as noted on the 48th day?

ARTICLE VI. — *Teaching the Deaf and Dumb to Speak.* Communicated by DAVID GREENBERGER, Ph. D.

At the regular meeting of the Board of Education held on Tuesday the 6th inst., the Superintendent reported that room No. 3, in the La Salle Street school, was given to Mr. Greenberger for the purpose of educating deaf and dumb children between the ages of six and twelve years, after the European system, that is, to teach them to speak and to understand what is spoken to them by distinguishing words from the motions of the speaker's lips.

Almost all parents of deaf mutes in this city and the surrounding places avail themselves of the benefits of this school, which was opened on Monday the 12th inst.

This system of educating deaf mutes—called the Method of Articulation—which has been in use for a long series of years in all schools for that unfortunate class in nearly all Europe, and was recently adopted in the most prominent institutions in this country, is founded upon the fact that speech, or articulation, is a mere mechanical process, the result of certain movements, identical in all individuals, of the lips, tongue, and other vocal organs. A single glance into the looking-glass is sufficient for anybody to perceive that the shape which the mouth assumes in enunciating the vowel *o* is quite different from that which it shows when we pronounce the letters *b*, *d*, etc.

Through patient study and practice a deaf mute acquires the ability of comprehending these visible movements of the organs of speech—technically called lip-reading—with such precision and correctness that we can speak to him just as to persons endowed with the sense of hearing. Many a one who became deaf in old age, can converse by watching closely the lips of the speaker.

That is one part of the system; the other is to enable the deaf mute to utter sounds himself, and this rests upon the fact that the

above-named movements of our vocal organs, while performing their office, are necessarily and indispensably accompanied by a more or less forcible emission of breath from the mouth, or a vibration of the throat and chest, caused by the straining of certain muscles located in these parts of the body. While pronouncing the letter *p*, you must feel the puff of air on the back of your hand, if you hold it close before your mouth; or placing your hand under the angle of the jaw, and uttering an *e*, the vibration there is most sensibly felt. Of this vibration, and the expulsion of air from the lips, the sense of feeling renders the deaf mute cognizant, and gives him an idea of sound and speech. Having once that idea conveyed to him, there is no reason why he should not be able to imitate sounds and speech, and learn his native tongue. He does not use it now, not on account of his vocal machinery being incapable of operation, but simply for the same reason that an American child does not use the Chinese or any other foreign language, that is, because he never heard anything about it. He is dumb, because he is deaf. His vocal organs being in quite a normal condition, it requires only to convey an idea of sound to him, and to give him knowledge of his faculty to imitate it.

In the limited space now at our disposal, it is impossible to explain clearly and precisely the mechanical formation of all the letters of the alphabet; considering however that this journal is intended for a highly educated and intelligent class, we think it will be sufficient to have given a few striking examples to enable the reader to comprehend how the deaf mute is taught to utter the sounds of the different letters. As soon as he has learned those, we require him to join them to syllables and then to words with easy pronunciation; first, monosyllables: as, *eye*, *pie*, *tea*, *key*, etc.; then words with two syllables: as, *mamma*, *papa*, *baby*, *lady*, and so on.

Those who are unacquainted with the arduous and intricate labors that devolve upon the deaf mute teacher, generally think that after these mere mechanical exercises are over, the greatest obstacles are surmounted and all the rest of the instruction is a mere trifle. If it were so, the lot of those teachers would be more enviable than it really is. It is now that the difficulties of their task begin—difficulties no layman ever dreams of; for after the

idea of the phonetic part of speech has been instilled into the mind of the deaf mute, the most philosophical task begins to make him understand the logical meaning of all the parts of speech, the construction of sentences, the nice shades of meaning expressed in synonymes, etc., etc. Hearing people do not know themselves how they come by all these things, their teachers never had the trouble of explaining to them the meaning of such words as *is*, *has*, *can*, etc. If you do not ask them, they know what those words signify, but if you do ask them, then they do not know. The deaf mute being deprived of one of the most important avenues that convey ideas to the mind, he forms in the same images of only such objects as can be seen with the eyes, or grasped with the hands, etc., everything else is *terra incognita* to him; when he enters school, therefore, he can very easily be taught the names of objects by pointing at them or showing him the pictures thereof, but it is far more difficult to teach him words of an abstract signification.

That the deaf mute must be more successful in forming abstract ideas upon the basis of spoken language, than can be effected through the method of signs, the language of which is devoid of prepositions, conjunctions, pronouns, tenses, moods, etc., is too obvious to require argument, not to mention all the other reasons why the system of teaching him to speak is preferable to that of signs and the manual alphabet.

It must be very gratifying to all the friends of deaf mutes that the American instructors now subject the method of articulation to the test of thorough, systematic experiment. In 1867, the "Institution for the Improved Instruction of Deaf Mutes," was established in New York city, and this system there introduced. The last annual report of this institution presents facts, that give evidence not only of its past prosperity, but are justly encouraging to its hopes for the future. Last winter the president and principal of the institution proceeded to Albany, taking with them a few of their pupils, in order to illustrate the method used in their school before the members of the Senate and Assembly in the State of New York. This they did with such success as to excite general surprise, consequently a bill was passed in both houses in the month of April, placing this institution upon the same legal basis with the old New York institution. Soon after, the State

donated to that noble institution the sum of $10,000 to enable it to receive as many private, State, and county pupils as may be intrusted to their care.

For the sake of the large and unfortunate class of deaf mutes, we wish that this system may soon be adopted throughout all the United States.

ARTICLE VII.—*Cerebro-spinal Meningitis and Chloroform.* By J. E. HARVEY, M.D., Walkerville, Ill.

Having read the case of trismus nascentium cured by the application of chloroform to the spine, as reported by T. L. Papin, M.D., of St. Louis, it occurred to me that it would be equally efficacious in cerebro-spinal meningitis.

On the 12th of August last, I was called to a case of the above-named disease, occurring in a boy two and a half years of age. I applied sulphuric ether (having no chloroform), by means of folds of flannel wet with it and placed along the spine, from the occiput to the sacrum; and gave it by inhalation at the same time, though not to the extent of producing insensibility. The effect was most gratifying, overcoming in three hours the condition of tonic contraction of the extensor muscles of the spine and the flexors of the legs; on the omission of the application, the muscles became again rigid on two occasions, but soon yielded; the patient was convalescent upon the fifth day from the attack. The patient was kept upon the muriated tincture of iron throughout the attack.

Epistolary.

My Dear Professor: — An Englishman once said truthfully, but with sarcasm, that the American alone knew the use of the "small of his back," he sat upon it; and, in return, we say that if these foreigners could experience the soothing, comfortable feeling of having one's heels well elevated, the blood flowing freely from the lower extremities, thus relieving the "engorgement of gravitation," they might soon adopt the ungraceful custom, and believe that some good could come out of "Lunnen;" but, unfortunately, the national foot is too large and cumbrous to be raised above the tangent level of the floor, and they must sit, perforce, square upon their ischiatic tuberosities. Be this as it may, here we are, with our heels considerably high, looking out of our office window, enjoying the trembling sunlight, snuffing up the bracing air, watching the small, fleecy white clouds chase one another across our limited patch of blue sky, like school-boys on a romp; and thus passing the *dolce far niente* of a listless existence. And yet we are not idle, the brain is seething and writhing in the throes of composition; and the blue smoke rises and curls in fantastic wreaths and circling eddies from our pipe-bowl, consoling, to some extent, our lonesome hours, and spreading a fragrant veil above and around our head, through which we seem to see, as if in some remote land, pictures of the past,—of boyhood, of hope, of peace, and of freedom from care—gone, gone forever; pictures of the present—so gloomy, so sorrowful, and so friendless; pictures of the future—alas, the tears will well up in our eyes and obscure the view, better, perhaps, for we should seek no further.

Professor, are you a fatalist? Do you believe that, what will be will be, just as what has been *was?* Do you for a moment suppose that free agency may control and shape the destinies of men, even in the slightest degree? You have read, of course, Kant, Kane, Leibnitz, Cousin and others, and like ourselves, perhaps, gotten so thoroughly mystified by their metaphysical subtleties, as to throw them from you with disgust, and ask yourself, what was man created for? If he has volition, why do circumstances inva-

riably control him? Ah, my friend, we may have free agency, but it is mighty limited, mighty limited, and as we crawl through this miserable existence, determining each day to follow certain rules of conduct, up rises some hydra-headed monster of circumstance to turn us into some directly opposite channel. Life is truly an enigma, and when we look around among our acquaintances, and see so many doing nothing useful, but throwing themselves away with a looseness, and fully cognizant of their own worthlessness, we can only presume them placed here as an example to better men; while again, many known to us, not a few among the profession, believe the earth turns on its axis for their special benefit, and, egotists that they are, cannot understand that if they were to "pass in their chips" to-morrow, mankind would be the gainer. It is as natural to die as to be born, so they said in the olden times, and thus, in

> "Passing thro' Nature to Eternity,
> The sense of death is most in apprehension."

But why we should be so apprehensive; why we should fear this happy transition; why *la renaissance* should present any repulsive features, we cannot comprehend, unless indeed, one may have just forfeited a large life insurance policy, or become so wedded to animal instincts and appetites, as to dread the exchange for the spiritual—dropping Swedenborg out of the question. It is a matter entirely of education. The Ancients looked upon death as a handsome young fellow, with a circlet of evergreens upon his brow, and with an inviting smile, extending a friendly hand toward us; while we present him as a tall skeleton with scythe in one hand, and an hour-glass in the other, chasing some poor fellow, with long strides and clanking joints, to his dreaded charnel house. We remember as a child, the first time having this explained to us, that for weeks after we were afraid to be alone, and could not enter a dark room without whistling our loudest and shrillest notes, the perspiration oozing from every pore, the hair rising on the back of our head, and our toes squirming and twisting, like a bunch of worms in a boy's fishing basket.

Behold the wild Indian of our own continent, taught from his infancy to believe the principle of the *lex talionis* a religion; he kills, without compunction, any who may have injured him or one of his tribe; an eye for an eye, a tooth for a tooth; it makes no

difference whom he may sacrifice, but some victim must be offered to the manes of his companion. See with what stoical indifference he endures the various and devilish torments inflicted by his enemies; he gives up his life without a murmur, while chanting his death-song, and vaunting his own prowess and that of his people. He feels assured of joining the "Great Spirit," and amid the happy hunting grounds, passing an eternity of peaceful content, where the water is always sweet, and where the deer, and the buffalo, and the bear will ever be plentiful.

Again, see with what placidity the Orientalist smokes his opium, taking the crosses and burdens of life with calm philosophy, attending far more scrupulously to his religious duties than ourselves, and never fearing his future state. He feels that after "shuffling off this mortal coil" he will be translated to a Mahommedan paradise; where rivers of gold and silver flow through groves of perennial greenness; where flowers ever blossom and scent the "fainting air;" where birds of gorgeous plumage ever carol their sweet melodies; and where rosy-fingered Houris, with tinted lids and glistening skins, administer to his spiritual wants and necessities forever. What a charming philosophy with which to pass life and face a future; true, bereft of all responsibility, repressive of all energy; but as we belong to the school of Optimists, why not? When we look about us, and see mankind possessed of but *one* idea, worshiping at but *one* shrine; striving, struggling, fighting for the *one* thing, money, and, to get it, emasculating themselves of every quality of manhood; then we ask again, why not?

But to leave such reflections, and to come to more material things. In reading over the proceedings of the National Medical Association, lately assembled in Washington, we cannot for the life of us see anything to commend. How is it with so many good men together, that so little was done to advance science, to uphold the profession in this country, and to foster and enlarge the proper *esprit du corps* among us?

Instead, we find nothing but contention and strife, and every thing done to throw discredit upon us, and above all, to our utter astonishment, the appointment of the "cold water philosopher" of this city, as President of the Committee on the Code of Ethics. Can you tell us by what jugglery this was brought about? Was there no other physician from Chicago, knowing his record, to object to

this outrage? If the profession at large is not aware of it, it is a well-established fact here, that he is the most open and persistent violator of every principle and rule contained in that code, and, except among the small circle of parasites and flatterers, who feed upon the crumbs thrown them, there exists positively none but who complain, and will testify to his ignoble and unprofessional conduct. It has been so with him for years, and this "peripatetic professor" stalks unblushingly abroad, to injure and defame every physician whom the chances of practice unfortunately bring him in contact with. So far has this evil reached, that in the neighboring towns and cities many practitioners refuse absolutely to consult with him; and in this city, we are acquainted with numbers of excellent men, who would throw up their cases before permitting him to cross the threshold, while they were in attendance. It is well understood, that it is his invariable rule, either directly or by inuendo, to weaken the attending physician, instead of instructing, or strengthening his position; and if he can do it in no other way, by charging such small fees—though he is the loudest declaimer for a high tariff—as to appeal to the weakest side of human nature. As for ourselves, we do not know him personally, but we have always refused to meet him, and shall do so to the end of time, not only on this account, but we have little faith in the man of hobbies, whose therapeutical combinations—anywhere from 4 to 40, good for the druggist if not for the patient—imply obscure diagnosis, and seem framed upon the principle, that if one remedy won't avail, a dozen or more may hit the mark.

And how, or by what right does the "ubiquitous doctor" represent in every medical assemblage the profession of this city? We have here many men, well educated, of ripe experience, and of sound judgment, far abler to practice consistently and conscientiously, who have no say in this matter, as they are not members of his *clique*, nor belong to the Chicago Medical Society. It is about time that such outrages be checked, and we invite all members to forward their complaints, properly substantiated, that we may embody them in a protest to be presented to the National Association, to meet next year in San Francisco. It shall be our duty to see if stubborn facts can be controverted, and if such backsliding may continue with impunity, or without exposure.

And now to finish, let us say, *place aux dames*, and quote from an old author:

> " La femme souvent varie,
> Bel fol est, qui s'y fie."
>
> A woman so often varies,
> That he who trusts has *rabies*.
> (Free translation *after* Hood.)

We take the above as the text, and you will permit the introduction of an episode, a romance in real life to a certain degree, which, as our JOURNAL lays some claim to literary merit, may not be out of place. Several months back, we were called upon to attend a young gentleman in the last stages of consumption, and though his physical decay was too far advanced to hold out the least shadow of hope, yet we were soon convinced that there existed some mental element, in all probability lighting up the disease *ab initiô*, and now tending to hasten its termination. After a few weeks he took us partly in his confidence, and on the night he died, while holding his poor attenuated hand, and wiping the damp of death from his white, smooth forehead, he drew us gently towards him, and placing a letter in our hands, said, " Doctor, when I am gone, think kindly of me, do not suppose me too weak and foolish, because I have repeated the history of the world; a history beginning with Adam; has been for six thousand years, and will be for six thousand more, should the world last. I loved, I trusted, and I was deceived. The paper you hold, will give the few links wanting, and you will then the better understand me. If in your power ——" here the voice grew so feeble, that with our ear to his mouth we could barely catch his words, while the arm clasped around our neck began to relax, "——follow her up and see if——she cannot be turned——from such a course——" These were his last words, he grew weaker and weaker, and in the long solemn hour after the midnight, his soul, with many mutterings to her he loved, went out through the valley of the shadow of death, to his Maker.

C——, July, 186 .

For the love I bore you, I labored earnestly and faithfully many years, to keep you pure and undefiled; but, alas, you *would* not understand me, and you *dared* not appreciate my efforts in your behalf, for they would militate against your natural instincts, and would keep you out of that "giddy whirlpool" of meretricious display and fashion, termed the world. Go on;

time will come, too late for my happiness, too late for your salvation, but it will come with inexorable certainty, when in an agony of spirit, you will exclaim on your bended knees, Oh, God! *he loved me truly*, and had I heeded his admonitions, all would have been well. I have not studied you in vain for so many years. I *do* know you, and I *do* understand the demands of your nature. No one man, were he an Apollo in beauty, a Pericles in wisdom, or an Alexander in manly enterprise, would content you, or allay those feverish longings for worldly dress and ornamentation; aye, even to the sacrifice of every quality which should ennoble the name of woman. Do you ever think of your childhood? and the tender embraces of your mother? And does not the shadow of her purity and virtue ever fall upon you? Have you forgotten the endearments of your kind father? And do not such reminiscences beckon you back from the road to sin and crime upon which you entered in ——, came here to follow, and been longing for—though held back by a loving hand—since your advent in this city? Oh! I much fear such qualms do not often come to you, for now you seem to have truth for none; your sincerity a deception; your professed love a sham; and your heart—if you ever possessed such a thing—can be made to flutter by the presence or attractions of any man, be he patrician, or be he proletarian. Though I began slowly to recognize such traits in your character, still I loved you to adoration, and had almost foresworn my God for your sake; but, as the truth forced itself upon me, the little manhood and self-respect left, arose in my defense, and declared me no longer a slave to be trampled upon, and death before such dishonor. Being ever a free-thinker, that is, holding my own opinions on many subjects apart from the world around me, I did, and do now, believe that leniency will be shown those committing many of the so-called sins, springing from tenderness of feeling and from the heart; and for all that has passed between us, or rather for the part I took in this unfortunate and wretched *liaison*, I am ready and willing to be arraigned, and feel assured that there will be forbearance and mercy for my many sufferings; as this love, so new, so fresh, so pure, elevated my life, rendered me truer to my manhood, sublimated every noble feeling of my nature, and was the means of turning me from many evil courses, incidental to the life of every man. You went to D—— twice, since I have known you, ostensibly for business purposes, and there committed with a low man, such crimes as to stain your reputation, and reeking from this bed of shame, you returned here and professed to love *me*. This I did not find out until your own conduct aroused my suspicions, but I did find out *all*, and substantiated afterwards by your voluntary confession, in which you simply declared, " because he was so kind to me;" without however, one iota of affection to excuse you, and without one word of the small sum of money received for this barter of your womanhood and honor. In my infatuation I forgave even this, hoping that with me, and under my advice, guidance and assistance, you would endeavor to lead a better life, but I found the seeds of impurity in your blood, which must blossom into crime, or you would forego your nature. I am wearied almost to the death. I see that the

struggle made so desperately has been useless, and as my future was staked upon this issue, I can only add, that he who puts his trust in woman had better rest in his grave. Do not imagine for a moment, that because a few disreputable women manage to lead the life of a gaudy butterfly, accumulate a little property (the wages of sin), and occupy a *quasi* respectable position in society, that all thus succeed. Far from it; the vast majority associate only with a questionable class of men and women, without love or friendship, and before long the inevitable laws of fate revenge their outraged femininity, and hasten them to untimely and dishonorable deaths. And as a last appeal, let me beg you to desist; let me implore you by the memory of all that was ever dear to you, to turn before it may be too late. Struggle on, no matter how great the deprivations, how many the burdens, but struggle on; and, with a watchful Providence to assist you, you may yet be saved. I say for the last time, farewell; we can never meet again; the touch of the destroying Angel is on me, and before many months my troubled life will have closed. I do not despise you, though you have wrecked me, but I do pity you from the bottom of a poor crushed heart. I shall pray for you far more earnestly than for myself, and if in the coming life it be granted to watch and guide those on earth, I shall be with and protect you.

Farewell—Farewell.

Yours, Sincerely, D——.

This letter was evidently written under great mental distress, and the strength for such a task deficient; besides, many words, almost sentences obscured by the "dropping tears" of my poor patient. We have corrected such defects as lay in our power, and present it, as the history of a sad, a true, and a tender love, that which could emanate only from one of the most generous impulses, and would have rendered any true woman's life supremely happy. What must have been the feelings of that miserable creature, after reading such an appeal from a dying lover? We have seen her since, and the furrows and lines of sorrow, but a desperate resolve, are plainly marked on her sweet face. She seeks no palliation except in excess, and crime brings no blush to her cheek.

Poor soiled dove; thrown out of the pale of society by your own acts, man might forgive, and the Young Men's Christian Association might save; but your own sex, with the implacable animosity of the Furies, will pursue and hunt you to your death.

VIATOR.

CHICAGO, Sept., 1870.

Editor's Book Table.

[NOTE.—All works reviewed in the columns of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN & COOKE, whose catalogue of Medical Books will be sent to any address upon request.]

Medical Diagnosis, with Special Reference to Practical Medicine. A Guide to the Knowledge and Discrimination of Diseases. By J. M. DACOSTA, M.D., etc. Illustrated with engravings on wood. Third Edition, revised and improved. Philadelphia: J. B. Lippincott & Co. 1870.

The success achieved by this treatise should be gratifying not only to the author himself, but to the profession. It is now an indispensable book to both students and practitioners. Clear, yet with no redundancy, it is a model of excellence in teaching. It is a good omen that books which elucidate facts about which there can be no question, yet whose knowledge is imperative upon the practitioner, are becoming popular, to the exclusion of pretentious catalogues of symptoms without reference to causation, followed by routine measures and methods of treatment, based almost wholly on *post hoc ergo propter hoc* reasoning, or the bald *ipse dixit* of some antediluvian, without the shadow of an idea of the true philosophy of medicines in his noddle. We gladly welcome such books, but from the "Pennyroyal-is-good-for-a-cold," or even the "Veratrum-Viride-is-good-for-fevers" style of literature, GOOD LORD DELIVER US!

What the profession wants, is to know, first, what the human body *is*, whether dead or living; then, *What is the matter?* when it is out of gear. Knowing these things, he is a blockhead who insults our intelligence, that undertakes to foist his pitiful specifics and mediæval mixtures upon us. That is sheer Homœopathy—no matter what name it goes by.

The Physical Exploration of the Rectum: with an Appendix on the Ligations of Hæmorrhoidal Tumors. By WILLIAM BODENHAMER, A.M., M.D. Illustrated by numerous drawings. New York: William Wood & Co., 61 Walker Street. 1870. Pp. 54.

A very useful, indeed, an admirable monograph, which each of our readers will find of practical use in every-day practice. We do not now call to mind any work which gives as complete an exposition of this important subject. In discussing the anatomy of the rectum, he denies the existence of valves from which important diagnostic results are noted. The best instruments and apparatus for physical exploration are described and illustrated, and he hopes for something valuable hereafter from the further development of "Splanchnoscopy by Translucency" as advocated by M. Milliot at the last International Congress at Paris. M. Milliot, it will be recollected, introduced into the stomach and rectum glass tubes of small calibre, containing two platinum wires connected with the electrodes of a battery. In this manner an intense internal illumination renders the visceral parietes translucent. Very particular directions and precautions are given with regard to the several points of manipulation.

The appendix discusses the ligation of hæmorrhoidal tumors. The author advocates the use, almost exclusively, of the silk ligature, well waxed and with as little twist as possible in it. But for details we must refer our readers to the monograph itself, which we advise them to purchase.

The American Dispensatory. By JOHN KING, M.D., Professor of Obstetrics and Diseases of Women and Children, in the Eclectic Medical Institute of Cincinnati, etc., etc. Eighth Edition, completely revised and largely rewritten. One vol., royal octavo, 1440 pages, sheep, price $10.00. Cincinnati: Wilstach, Baldwin & Co., Publishers, 141 and 143 Race St.

Our Eclectic and Homœopathic friends are great believers in medicines, of which this ponderous volume is a striking evidence. A glance at its index almost overwhelms one with astonishment that anybody should be foolish enough to die, or even be sick, whilst so many full grown remedies for every imaginable ailment

are furnished to his organs of deglutition or absorption. The disciples of Hahnemann not only bring in a swarm of new medicines, but, by their mysterious "provings," show that each of them is possessed of a hundredfold more varieties of symptomatic effects, than the proverbial nine-and-thirty stinks of Cologne. This is a somewhat singular fact when taken in connection with the notable truth that, contemporaneously with the advance of scientific medicine, the number and importance of so-called medicines are becoming wonderfully contracted. It is safe to say that educated medical men trust very little in drugs, but seek to control, for the preservation and restoration of health, those larger influences which our fathers so strangely termed the "Non-naturals." In our own view, the man of multitudinous drugs and complicated formulæ, is dangerous to the physical well-being and safety of the community. In a city like this, one can follow such men through their rounds by the crape on the handles of the door bells. It is proper to say that the science of medicine in this age is being advanced, not so much by the discovery of new drugs, or new effects from those previously in use, as by better acquaintance with physiology and other natural sciences. It is in rare instances only, that even the most popular so-called medicines have achieved their position save by modes of reasoning which, in any other department of human knowledge, would be counted simply absurd. Rational men see this, and some are governed in practice by it; nevertheless very many still believe in Chinese gongs and Indian howlings instead of Nature's laws.

The volume before us must rejoice the heart of your true believer in drugs. It is stuffed, from board to board, with accounts of health-bearing herbs and roots, minerals, chemical combinations, "pharmaceutical compounds, alkalies, resinoids, oleo-resins, etc., and likewise all those poisonous mineral agents so strongly objected to by the new school physicians, thus forming a volume full and complete in itself." It is a work evincing abundant industry on the part of its author, and we commend it to those of our subscribers who want us to chronicle the wonders of mint, cummin and anise, at risk of neglecting the weightier matters of the law. We commend it to those of our compeers in the city who are so hurried by business, and yet so desirous of information, that they read in their carriages while passing through

the most crowded streets; their attendant Jehus, meanwhile, borrowing from their association an impressive dignity wondrous to behold. Dear brethren, this book will enable you by its size, at least, to hide your blushes from the gaze of your multitudinous admirers.

Dr. King must have the credit of arranging the voluminous material at his command in excellent order, and gives perspicuously, and, so far as our examination permits us to judge, with remarkable correctness, the physical history of the multitudinous "Botanical" Materia Medica. Very many of the so-called eclectic medicines are now in daily use—employed by homœopathists and physicians regularly, and in this great volume the seeker can find the claims of each and all.

Editorial.

Communications

Are respectfully solicited from our subscribers in different sections of the country. It is a mistake to suppose that extraordinary cases are the only ones desired by readers. Sketches of the prevailing diseases, their general and local causes, and the modes of treatment found useful under all the circumstances, are matters which all thinking medical men are anxious to read. It is well known that we have great confidence in that large and intelligent class of the profession, an Eastern contemporary sneeringly denominates, "the country members." We wish to hear from them.

News and Gossip.

Profs. Huxley and Tyndall propose to visit and lecture in this country, sometime the ensuing year. The former gentleman's official position in the British School of Mines yields him about $3,000 *per annum*, a sum which would be vastly surpassed by a series of lectures by him, anywhere in the United States.——Prof. A. Winchell, State Geologist of Michigan, presented, at the recent meeting of the American Association for the advancement of Science, a paper on the Magnetic Wells of Michigan. We hope

to have more light on the subject when it is printed.——An enterprising citizen of Chicago, claims to have discovered a magnetic water on his farm a few miles out of the city. Prof. Winchell of Ann Arbor, and Dr. Duffield of Detroit, are quoted in the connection. Does anybody recollect Prof. Silliman's (the younger) elaborate pamphlet on the petroleum lakes of California? *Vive la bagatelle!* Now let us have Chicago River Water duly bottled, certified by the Michigan State Geologist, assisted by the Chemist thereof, and sold as NATIVE MEDICATED SOUP. The primeval forms are there, and artificial combinations as complicated as the most fashionable mixtures of heterogeneous incongruities that adorn the pages of our apothecaries' prescription books. As the old Hopkins saw-mill at Grand Haven, Michigan, has been reconstructed to a universal sanitarium and double-back-action rejuvenator, so let us have the Cook Co. and Mercy castles of *ochlesis* and disease, converted into water cures, (with magnetism and soup thrown in,) connecting each with the North Branch, or Healey's slough, and the recent *tap* of the Styx, "down by the Riverside." Stamps to be furnished by the inmates.——The Woman's College is *fait accompli*, and our table is covered with communications on the subject. We must decline all alike, or fill two or three numbers of the JOURNAL. We have only to explain that we do *not* know why all the Faculty, but one, are nominally male; nor why the Professor of Diseases of Children, is an inveterate old bachelor. That is their business, and we are no more called upon to explain it than why a so-called male college receives students for one session by promising each of them professional chairs the next. We repeat, it is not our business, as journalists, to answer such questions. Unquestionably, notes addressed to the Secretaries of the respective faculties (enclosing stamps for return postage) would elicit prompt replies. The advocates of Mesdames G——s, L—v—y, and B—f—t, must not ask us to take sides.——Scribonius Largus mentions a black torpedo applied alive to the head as a remedy for headache. Several other ancient authors confirm the efficacy of the practice. Thus it will be seen the *gymnotus* antedated modern galvanism.——Hennig asserts that catarrh of the Fallopian tubes, is more common than similar affections of the body, neck or vagina. Now then, let the endoscope be fastened on to the end of an improved speculum, the cervix be duly

stretched and the enemy be dislodged by the right or left flank movement of the *porte caustique.*——Vegetable charcoal is recommended as a local application to burns. In young children a tepid bath containing a little sulphate of iron in solution, is used for the same purpose at the hospital at Lausanne.——Dr. Davis, of Iowa, claims that Bromide of Ammonium is *innervating*, in striking contrast to Bromide of Potassium which is *enervating.*——The *Edinburg Journal* says, that Balsam of Peru is *the* remedy for scabies. The patient is stripped and well and carefully rubbed over with the balsam from crown to heels, avoiding abrasions. It soaks into galleries and eggs, and kills everything on the body in an hour. A second rubbing ten days after, kills any stray animalcule or products of eggs that may have been in the clothes the first time. After this the clothes need no disinfection of any sort.——The *Imparziale*, contains (*Nashville Journal*) a vigorous attack upon the practice of circumcision, by Dr. Sonsino, who claims that as a hygienic measure it is a failure; that the principles of medical ethics do not allow of its performance as a prophylactic of venereal affection; and that as a religious rite, it is deserving of condemnation. On the point of prophylaxis, we remark that last month we had occasion to treat a chancre near the frænum of an adult circumcised in infancy. Our observation leads us to believe such cases extremely rare.——An exclusively skim milk diet is said to be not only useful in diabetes, Addison's disease, Bright's disease, but in the treatment of corpulency to be far more efficacious than Bantingism.——A London telegram says that 150 persons are dying, daily, of cholera, in St. Petersburgh. Which reminds us of a practice suggested to us several years since by our valued friend T. O. Edwards, M.D., now of Lancaster, Ohio. On the approach or occurrence of collapse use this:

℞ Strychniæ Chrys., - - - - - gr. ss;
Sp. Terebinth., - - - - - ʒ ij;
Muc. Gum Acac., - - - - - ʒ viij;
M. Intim.
S. A tablespoonful every fifteen minutes; shake well.

This will be found useful in many other grave forms of collapse.

Germane to Prof. Hodgen's discovery, we are reminded of this scissoring:

A Hard Customer.

The scene of the following incident was a Utica restaurant. A man recently entered the place and ordered a very elaborate dinner. He lingered long at the table, and finally wound up with a bottle of wine. Then lighting a cigar he had ordered, he leisurely sauntered up to the counter and said to the proprietor: "Very fine dinner, landlord; just charge it to me, I haven't got a cent" "But I don't know you," said the proprietor, indignantly. "Of course you don't. If you had you wouldn't have let me had the dinner." "Pay me for the dinner, I say." "And I say I can't." "I'll see about that," said the proprietor, who snatching a revolver out of a drawer, leaped over the counter and collared the man, exclaiming, as he pointed it at his head, "Now see if you'll get away with that dinner without paying for it, you scoundrel." "What is that you hold in your hand?" said the impecunious customer, drawing back. "That, sir, is a revolver, sir." "Oh, that's a revolver, is it? I don't care a damn for a revolver, I thought it was a stomach pump."

Morphine dissolved in the proportion of one part of the hydrochlorate to thirty of flexible collodion, is advised as a local application with a camel's hair brush, in neuralgia.——Owing to the neglect of vaccination, small pox is on the increase in London. ——Dr. Charvet extols the use of a solution of permanganate of potash in water, in fœtid expectoration.——The *Medical Press and Circular* says, that a combination of strychnia and iodide of ammonium is much to be lauded in fatty degeneration of the heart. The thirtieth of a grain of strychnia, gradually increased to the tenth, is to be given with two grains of the iodide of ammonium, in a little spirits of chloroform and camphor julep, as a vehicle. In some instances the iodide was rubbed over the cardiac region in the form of a cerate. Of course, other therapeutic measures may be indicated.——A Kentucky Medical College, somewhat noted for its advocacy of high fees, has resorted to the old dodge of instituting a Beneficiary Scholarship for each Congressional district in the Southern States. A religious contemporary, which evidently has not yet cut its eye teeth, commends this as a *noble* benefice. In *Jahr's Manual* we read that small doses of gold produce excessive scruples of conscience. We fear that the *large* fees of the college with which our friend Gaillard is connected has had a contrary effect. However, we are assured "that with proper and welcome delicacy, the names of those who have secured the Beneficiary Scholarships will be known only to the Dean of the Faculty." This is what we may call "ratting to the opposition."

Pro pudor! This attempt to bolster up a feeble school, reminds us of the old examination and its result:

Ques. *Quod est creare?*

Ans. *Creare est facere aliquid ex nihil.*

R. *Ergo, Creamus te Doctorem.*

——Sidney Smith said that "Whoever discourses in the accusative case, must order his language with great care and precision," an injunction our New York weekly contemporary overlooks or disregards. In his attack upon the American system, he committed simply a blunder. When his attention is directed to plain facts, he is anxious to drop the subject. Under cover of a pun (somewhat too obvious to be bad enough for reprehension, as "facetious") he disappears from the arena of argument. But trivial as is the pun, we accept it in all its length, breadth and thickness. We immensely prefer the Russian (*Rush*-ian says our friend) system to the Chinese. Russia has shown a spirit of progress and illustrated a real advancement, within the century past, that it will take ages for China to parallel.——Why does not somebody manufacture a hypodermic syringe that will not get out of order, every third time trying? The cheap, badly constructed toys of the kind we have seen, and have been occasionally obliged to use, are a disgrace to the craft. A similar remark may be made with regard to the atomizing apparatus. This is frequently a useful affair, but, so far, as primitive in its construction as a wooden plough. The brass and glass in it do not relieve it from its absurdity. Let us have something better.——Correspondents of the *American Journal of Pharmacy* commend the following combinations as preferable to the officinal *Mistura Cretæ:*

℞ Cretæ Preparat.,
Pulv. Gm. Acaciæ,
Glycerin, - - - - - āā ℥ j;
Aq. Cinnamomi, - - - ℥ xv;
M.

℞ Cret. Preparat., - - - - - ℥ ss;
P. Sacch. Alb.,
P. Gm Acaciæ, - - - - āā ʒ ij;
M. S. artem.

A dram of this powder to half an ounce each of water and cinnamon water, for each fluid ounce of chalk mixture required.

Dr. T. S. Dowse gives in the *London Pharm. Journal* (*Am. Jour. Ph.*) the following as the best formula for the preparation of Chlorodyne. He does not give the dose, but it is probably the same as that of the original. It does not contract the pupil:

℞ Belladonnæ Ext. - - - - ℥ij;
Morphiæ Muriatis, - - - - gr. xxx;
Ætheris Rectif., - - - - f ℥ viij;
Chloroformi, - - - - - f ℥ viij;
Acid Hydrocyanic dilut., - - - f ℥ iv;
Ol. Menth. Piperit., - - - - gtt. xxx;
Capsicine, - - - - - gr. vj;
Mist. Acaciæ, - - - - - ℥ xx;
Caramel, - - - - - ℥ j;
Theriacæ, - - - - ad ℥ lx;
M. S. artem.

The *American Practitioner* gives a different formula, which presents some advantages:

℞ Chloroformi, - - - - - ℥ vj;
Tinct. Capsici, - - - - ℥ vj;
Tinct. Cannabis, - - - - - ℥ iss;
Ol. Menth. Pip., - - - - gtt. xxxvj;
Morph. Hydrochlor., - - - - gr. lx;
Acid. Hydrocyan. (Schule's), - - ℥ j;
M.

Dr. Metcalfe recommends in *Diphtheria:*

℞ Strychniæ, - - - - - gr. j;
Acid Nitric, Dil., - - - - ℥ j;
Aq. Pur., - - - - - ℥ vij;
M. S. Three to five drops three or more times a day, to a child three years old.

The following is recommended as a local and general antiseptic in similar affections:

℞ Iodinii Bromid., - - - - gtt. xx;
Syrup. Acaciæ, - - - - - ℥ iv;
M. S. Apply locally and give internally a teaspoonful every four hours.

Dr. George Bayles commended the following, in obstinate vomiting:

℞ Chloroform., - - - - - ℥ ij;
Tinct. Aconiti, - - - - ℥ iss;
Tinct. Opi. Camph., - - - - ℥ ss;
Aq. Pur., - - - - - ℥ iij;
M. S. A teaspoonful every hour, p. r. n.

An old mixture, favorite in the Montreal General Hospital, is the following:

℞ Potassæ Nitrat., - - - - ℥ ss;
Acet. Scillæ, - - - - - ℥ iv;
Tr. Opi. Camph., - - - - ℥ iv;
Antim. Pot. Tart., - - - - - gr. xij;
Aq., - - - - - - ♁ iiiss;

M. S. A tablespoonful, in febrile and inflammatory affections requiring sedative and eliminant action.

Dr. J. B. Chagnon, in the *Canada Med. Journal*, commends as infallible, for after pains:

℞ Acid Citric, - - - - - gr. v;
Aq., - - - - - - ℥ ij;

M. ft. haustus.

S. To be taken at once and repeat, p. r. n. every five hours in troublesome after-pains.

He says it acts as a nervine and as a preventive of inflammation.

Dr. Garretson of the University Hospital, according to the *Philadelphia Reporter*, has discovered a "specific for erysipelas." Here it is:

℞ Tinct. Ferri Chlorid.,
Tinct. Cinchonæ, - - - āā f ℥ ij;
Quiniæ Sulph., - - - - gr. xxx;
Aq., - - - - - - f ℥ iss;

M. S. Apply with a brush, four times a day.

The learned doctor, in a recent clinic, intimated that "common sense" taught confidence in specifics. [*Omne ignotum pro magnifico.*]

Dr. A. Given (*Examiner*) commends the following *novel* mixture in typho-enteric fever:

℞ Ol. Terebinth., - - - - ℥ ij;
Pulv. Acaciæ,
Sacch. Alb., - - - - āā ℥ iij;
Aq. Menth., - - - - - ℥ ij;
Tinct. Opi., - - - - - ℥ ij;

M. S. A teaspoonful every two or four hours until the bowels are checked; then lengthen out the dose to intervals of every six or eight hours, until tenderness has subsided.

"The turpentine penetrates the ulcerated surfaces, corrects the morbid action, stimulates the tissues, and sets up the healing pro-

cess. The tincture of opium is beneficial in arresting the peristaltic movement of the bowels, and allaying the morbid irritability of the parts; and by its power of arresting secretion, it promotes resolution." Regin Thompson, the fever man, prefers Oil of Sassafras and Soda. *Suum cuique*, etc.——A somewhat older writer, Paulus Egineta, in treating of urinary calculi, commends a species of Swallow, thus: "When this bird is pickled whole, and frequently eaten in a raw state, it makes the stones which are already formed be passed with the urine, and prevents them from being formed again, and if it be burned alive, entire, with its wings, and if the ashes by itself and along with pepper and a moderate quantity of Indian leaf, be drunk out of mulse, it will do the same thing."

Answer to Dr. Ruppaner; with a Review and Criticism on his recent report of a Case of Laryngo-Tracheotomy, including all the attested facts regarding the recent Partridge Poisoning Case at the Fifth Avenue Hotel. By Lewis A. Sayre, M.D., Professor of Orthopædic Surgery, etc., etc.,

Is the somewhat voluminous title of a pamphlet just received, with the endorsement "please notice," which we shall do, with all due courtesy to its author, by deprecating the publication of differences purely private and personal in their nature, such as the subject matter of the pamphlet before us. Personal quarrels generally possess very little interest for the public, and especially is this the case when the belligerents are physicians, "Doctors' differences" having passed into a proverb.

We have yet to learn a single instance of benefit to a professional reputation, by enlisting the public as partizans for its defense when assailed, while the profession at large are repeatedly made painfully conscious of detriment sustained in such contests. The subjects of difference treated in the pamphlet under discussion, could have interested none outside of the circle of personal acquaintance of the parties concerned, and these have doubtless long since formed decided opinions, which will undergo no modification by further evidence or discussion; while the profession at large, not having all the evidence upon both sides of the question, cannot possibly form a rational opinion. From such premises and from such only are we willing to form an opinion, but not even then to express one upon a purely private matter.

Obituary.

James Copland, M.D., F.R.S., the well known author and eminent physician, died in London on the 12th July last, of an attack of hæmaturia connected with prostatic disease followed by uræmia, æt. 78. He graduated in 1815. His "Encyclopædic Dictionary of the Medical Sciences," which occupied thirty years of his life, is everywhere known and highly appreciated. Every line of it was written by his own hand, and he personally revised and corrected the proof-sheets. Probably no one man since John Mason Good has accomplished so much by his own unaided industry.——Landon C. Rives, M.D., who died recently in Cincinnati, at the age of 80, was formerly associated in the faculty of Cincinnati College with Drs. Drake, Gross, Parker, Rogers, Harrison, and McDowell, certainly one of the ablest associations of Medical teachers ever known in this country. Drs. Gross and Parker are now the only survivors.——Dr. Auzias Turenne, the syphilographer and experimenter on syphilization, died in Paris, May 29th, aged 59.——Sir James Clark, known as Physician in Ordinary to Queen Victoria, and for his works on climate and consumption, died June 29, at the age of 81.——Gunning S. Bedford, M.D., Professor in the University Medical College of New York, author of several works popular with the profession, died in New York on the 5th ult.

Loot.

Chloral-iana. [From *American Eclectic et al.*]

Dr. T. S. Clousten, Medical Superintendent of the Cumberland and Westmoreland Asylum, thus sums up his experience after having given the hydrate of chloral in forty cases of various forms of insanity:

"1. It has proved a most safe and certain sleep-producer. It seems certain that by it we can compel sleep in any case.

"2. By means of this property, attacks of insanity may probably be warded off in some cases.

"3. Its action in abating and soothing excitement is more uncertain than its sleep-producing power, and lasts a shorter time than that of any signally powerful drug; but it is most valuable in certain cases, especially in some recent and curable ones, where formerly we should have been afraid to give opium. It has no directly curative action, but it evidently could be so employed as to tide over short attacks of insanity, and to prevent certain cases from being sent to lunatic asylums.

"4. Whether it does good or not, it never does harm. In this respect it is the very king of all narcotics.

"5. Its effect on the temperature of the body is variable in

different cases, and in the same case at different times; but generally it is to reduce the temperature slightly, taking the average of a number of patients. It differs from opium in this respect, which raises the temperature; but the reduction caused by chloral is not nearly as great in maniacal excitement as that caused by alcohol in large doses.

"6. It should be given to subdue brain excitement in doses, beginning at twenty or thirty grains, repeated from three to five hours. To produce sleep in great excitement from forty to sixty grains are required, the latter dose not failing in one per cent. of the cases."—*British Med. Journal*, May 7, 1870.

Dr. John B. Tuke, Medical Superintendent of the Fife and Kinros District Asylum, has employed chloral with good results in acute mania, asthenic insanity, the insomnia of melancholy, and in chronic cases of insanity, in which violent outbursts of excitement occur. "The advantages of chloral," he says, "over all our hypnotics with which I am acquainted, are—

"1. That it is more uniformly certain in its action.

"2. That it has no depressing influence.

"3. That it does not cause constipation.

"4. That it does not produce nausea.

"5. That its effects are more lasting.

"I believe it to be the most valuable means of procuring sleep which has yet been introduced into the Pharmacopœia of the asylum physician."—*Lancet*, March 26, 1870.

Mr. Spencer Wells stated, at a meeting of the Obstetrical Society of London, that in a case of furious maniacal excitement seen by him with Dr. Munro, one thirty-grain dose of chloral was followed by almost immediate calm and afterward sleep.—*Lancet*, April 2, 1870.

Dr. Playfair also reported to the same society a case of threatened puerperal mania, where the patient had become maniacal after a previous labor, and after the present one exhibited the same symptoms which had preceded the previous attack, viz: restlessness, inability to sleep, etc. Thirty grains of chloral given at bedtime produced a long and quiet sleep, and the same dose was repeated every night for a week. Dr. P. has no doubt that this medicine kept off the threatened attack.

A case of puerperal mania was communicated to the Obstetrical Society of Edinburgh, by Dr. Thompson, who stated that from his observation in that case he looked forward to chloral being of the greatest service in the acute stage of that disease.—*Edin. Med. Journal*, May, 1870.

Mr. R. G. Hill reports (*Med. Times and Gazette*, April 9, 1870,) a case of acute mania in a female, in which the usual remedies

were tried without benefit, when chloral was given with the happiest effect.

Much additional testimony has been adduced as to the value of the hydrate of chloral in *delirium tremens*. According to the experience of the physicians of the Royal Infirmary, Edinburgh, chloral seems in this disease "to be almost a curative agent—as in most cases, notwithstanding violent excitement or delirium, it produces a sound sleep, from which the patient frequently awakes sane and rational. In doses of forty or sixty grains, repeated every half hour three or four times, a deep and lengthened sleep generally ensues. Although there are several exceptions, many most interesting and remarkable cases might be cited to prove the general rule."—*Brit. Med. Journal*, April 30, 1870.

Mr. Maunder has employed it successfully at the London Hospital, in a case of furious delirium tremens in a woman. A dram dose was given, and within half an hour she was fast asleep, all maniacal symptoms being abolished for the time. The dose was repeated, with the effect of keeping her quiet, and at the date of the report she seemed quite rational.—*Brit. Med. Journal*, April 2, 1870.

Dr. George W. Balfour has been equally successful with chloral at the Royal Infirmary, Edinburgh. He relates six cases of delirium tremens successfully treated, and says that the cases in his wards "vary from the merely excited fidgetty condition, known as the horrors, to the most exaggerated mania, often accompanied by repeated epileptiform convulsions. The cases given are amongst the severer ones treated; the milder ones succumbed more readily to the treatment, one dose being usually sufficient; the general result being to keep the wards almost empty, from the rapidity with which the patients are enabled to be discharged."

Dr. C. A. Stivers reports (*Pacific Med. and Surg. Journal*, May, 1870), two cases of delirium tremens successfully treated with chloral, in the San Francisco Hospital.—*Journal of Med. Sciences.*

The late Dr. J. Y. Simpson (*Medical Times and Gazette*), in his "Therapeutic notes on Chloral," remarked as follows: "I am not aware of any special contra-indications to the employment of chloral when used for somniferous purposes. Even in head and chest affections, when I should have been chary of having recourse to opium as an hypnotic, I have employed chloral with perfect success. The contra-indications to opium offered by a tendency to constipation, etc., do not exist against chloral."—*Med. Record.*

M. M. Pallen, M.D., St. Louis, Mo. (*The St. Louis Med. and Surg. Journal*), coincides with M. Demarquay that Dr. Liebreich's assertion "that chloral is decomposed in the blood, and that the chloroform resulting from this decomposition produces anæsthesia," is not the correct view. If chloral acts as an hypnotic and as a hyperæsthetic, it cannot be *totally* converted into chloroform. There is no doubt in his mind that chloroform is produced during the action of the chloral, but the chloroform arises chiefly by oxydation in the lungs. Dr. P. coincides with those who think that it is an hypnotic, and valuable as such an agent where opium cannot be used. He has used it extensively in monomania, endometritis, and puerperal convulsions, to procure sleep; in some instances as high as a drachm; to children, in doses from six to twenty grains, according to age.

It is applicable in that form of affection known as night-terrors. The child is sleepless, or even when it sleeps the slumber is disturbed, and it moans or it grits the teeth. All this should be overcome, or else the child in after years will be an epileptic. Chloral is the remedy, opium the poison. The dose to children will vary from four to twelve or more grains. He always uses, as the vehicle with which to mix the chloral, the syrup of tolu.—*Med. Record.*

Snake Poison and its Antidote.

The following communication appears in a recent issue of the *European Mail*, and throws an important new light on the therapeutics of animal poisons:

Sir—Having noticed of late the publication in both European and American journals of articles upon the subject, and particularly one under date March 2, 1870, under the heading, "The Cobra Question in India," I trust you will give publicity to this communication, on account of its importance; and am induced to ask for it a place in the columns of your journal, in the hope that it will afford to your readers, in India more particularly, a knowledge of an antidote for snake poisons, which may claim to be specific, insomuch as it has never been known to fail in a single instance during the past three years in different districts in this country, in which I have been able to induce its general adoption, and particularly by the *curanderos*, or curers (snake charmers). I have devoted no little time during the past twenty years to a study of the habits, peculiarities, etc., of poisonous snakes, and have made many experiments with their poisons, with a view to discover, if possible, specific antidotes to them, and have been so far successful as to be able to announce the law in therapeutics that "all animal poisons have their specific

antidotes in the gall of the animal or reptile in which these poisons exist."

The bite of the *cobra*, or of any other poisonous snake or reptile, can be cured by administering a few drops of a preparation of the gall of the *cobra*, which should be prepared as follows: Pure spirits of wine, or 95 per cent. alcohol, or the best high wines that can be procured, 200 drops; of the pure gall, 20 drops; in a clean two-ounce phial, corked with a new cork; give the phial 150 or 200 shakes. so that the gall may be thoroughly mixed with the spirits, and the preparation is ready for use. In case of a bite put five drops (no more) of the preparation into half a tumblerful of pure water; pour the water from one tumbler into another, backwards and forwards several times, that the preparation may be thoroughly mixed with the water, and administer a large tablespoonful of the mixture every three or five minutes until the whole has been given. In case the violence of the pain and hæmorrhage or swelling of the bitten part should be but slightly alleviated after the whole has been taken, repeat the dose, prepared with the same quantity of the preparation in the same way, and administer as before. In curing upwards of fifty cases of snake bites I have never been obliged to repeat the dose except in two instances, and have never lost a case. The *cobra* poison is no more deadly than that of a great variety of snakes found in South America, of which may be named the *Cascabel*, or *Rattlesnake; Boqui-dorada*, or gilded mouth; *Mapana-sapo*, or frog-headed Mapana; *Mapana-fina*, or *Lachesis*, *Niger*, *Birri* and *Verrugosa*, or wart snake. The poison of all these varieties produces death (under certain conditions—atmospherical, physical, climaterical, and electrical) in from fifteen minutes to two or three hours; but it is found that the gall of each variety (administered as previously indicated) is the perfect antidote for its own poison. The gall of the most deadly kind may be used in cases of bites of those less virulent, and is also applicable in cases of bites of the centipede, scorpion, stingray, star-lizard, or *Lacerta-stella*, and is also very effective in dog-bites. The native curers use a tincture of a plant called *Alconcito*, or *solobasta*, for bites of the *Cascabel* and *Boqui-dorada*, with very good success in cases of bites, and also as a prophylactic, by inoculation (in the point of the shoulder), for preserving themselves harmless against these poisons. For this purpose incisions are made at the lower point of attachment of the deltoid muscles, in the same manner as for vaccination, and into these are introduced small pellets of cotton (of the size of a millet seed) saturated with an alcoholic tincture of the *Alconcito*. Care is taken to keep within doors and out of the wet and dew for from fifteen to twenty days, after which period the inoculation is concluded. Of the efficacy of this process, I can say

that I have repeatedly tested it on dogs, in a district where every dog not inoculated, if bitten by a snake, invariably dies, and have never known an inoculated dog to show any inconvenience from the bite of the most venomous viper. This plant is the *Aristoloquia Colombiana.* In Brazil, the curers use the tincture of the *Aristoloquia milhomeus*, or *Arist. grandifloras.* In the United States, the Indians use the *Serpentaria*, or *Aristoloquia Virginiana*, and it is more than probable that the *Arist. Colo.*, or the *grandifloras*, is to be found in India.

During my research in this branch of natural history I have collected much interesting and valuable information, all of which I have incorporated in a small work that will shortly be published in English; but the reports of such a frightful number of deaths from snake bites as English journals record as having occurred during the past year in certain parts of India, have led me to address this letter to you, that the truth of the efficacy of this antidote for snake bites may be tested by every person who takes any interest in the matter, and that these tests may be so effectually made that a point of such vital importance as the discovery of the specific antidote for these poisons may be known throughout the world.

I indulge the hope that I may see repeated corroborations of the results of my own humble labors in this specialty through so many years.

Your obedient servant,

S. B. Higgins.

State of Magdalena, April 10, 1870.

—*Chem. & Drug., Lond.*, June 15, 1870.

—*Am. Jour. Pharmacy.*

A Dangerous Water-Pipe.

Attention has been called several times in this journal to the dangerous character of the *galvanized iron pipe*, when employed for conducting water to be used for culinary purposes. Instances of severe poisoning from the use of this pipe are continually coming to our notice, and we are led once more to caution our readers against it. It is almost a crime for dealers and manufacturers to recommend this zinc-covered iron pipe for water conduit, as they thereby jeopardize the health and perhaps the lives of purchasers. When this pipe comes from the hands of the manufacturers, it has a fresh, clean appearance, and to those who do not understand the nature of the covering, the idea is conveyed that it will not oxydize or rust, like ordinary iron pipes. But this is an error; it will rust even more rapidly than clean iron in most localities. The superficial covering of zinc is rapidly decomposed under the influence of ordinary pond and spring waters, and the

oxide, carbonate, and chloride of zinc are formed, which salts are of a deleterious or poisonous character. This covering of zinc on the interior is attacked immediately when water is allowed to flow through, and in some instances we have known it to be entirely removed in forty-eight hours. The insoluble carbonate of zinc is seen to float upon the water in the tea kettle and other water vessels used in families, and this has often created alarm where no suspicions previously existed. We hope the newspaper press throughout the country will caution their readers against the use of this pipe for water supply.—*Boston Journal of Chemistry.*

Therapeutic Uses of Iodoform.

Dr. Stiles Kennedy, of Newark, Delaware, communicates the results of his observations on the effects of this drug, which he considers to possess great value in various constitutional and nervous diseases. He gives the details of a case of periodic gastric neuralgia, probably connected with a rheumatic diathesis of several months' standing, in a man not 30 years of age, of antecedent good health and vigor. The pains in the stomach recurred on each afternoon, and lasted well during the remainder of the twenty-four hours. Quinine, iron, morphia, arsenic, blisters, mercury, and other remedies, had been administered without advantage. Two grains of iodoform, and the same quantity of pulv. ferri, were prescribed in pills three times a day, and in a week he was well. The second case was that of a man aged 45, who suffered from violent and frequently recurring pain in the scalp, running from the eyebrows to the occiput. A great variety of treatment had here also been adopted, the last being heroic doses of quinia, morphia, iron, and arsenic in combination, but without effect. Dr. Kennedy therefore ordered iodoform, pulv. ferri, of each one hundred grains, veratria one grain; to be divided into fifty pills, one to be taken three times a day. After twelve days' continuance the pain completely disappeared, and in the course of the last year only recurred twice, on each occasion being quickly removed by recommencing the use of the pills. A similar combination, without the veratria, was found very effective in sciatica, by another physician, and in several cases of ague by a third. Dr. Kennedy recommends it strongly as an addition to the ordinary plasters and ointments for syphilitic periostitis, etc.; in fact, he says an ointment containing from thirty to sixty grains of iodoform to an ounce of lard, is one of the most delightful remedies, so far as relief is concerned, to painful burns, sores, chancres, boils, etc., that can be found, promoting rapid healing. In two cases of chancre the dry powder was applied, with magical results.—*The Medical and Surgical Reporter.*

Fistula in Ano. By Tom O. Edwards, M.D., Lancaster, O.

In July number, 1870, of the *Gynæcological Journal*, (Boston), I find ingenious methods of performing the operation for above; and as any mode in some cases (so obnoxious to many patients is the knife,) that would be a success, and, indeed, in this, as in all cases, the more simple, if successful, is the best, I send you the result of my operations. In one case nothing but the knife could have been successful, as it was of twenty years duration, and the patient was induced to pound the buttocks and perineum with a small club, with a view of producing inflammation and union. This resulted in four fistulas, all radiating from one, and after the operation the admeasurement of the various cuts through the buttocks was nearly seventeen inches. This is possibly the largest on record, and was entirely successful, by careful dressing and slow healing.

What I propose to recommend in simple fistula, is the use of the string, differently introduced from the above cited cases, and a different string. The common silk ligature will rot in cases where there is much delay, and the shortest time employed by me has been twenty days. Having been disappointed, and, in one or two cases nearly well, finding the string to give way on being tightened, and thus giving the trouble of introducing another, in order to complete the cure, I resorted to a string made of sea grass, knowing its ability to bear any quantity of water any length of time without rotting, and very strong. My process is this: Introduce into the fistula* a canula, and immediately thereafter the index finger of the left hand in the rectum, feeling the canula, having previously prepared a silver or iron wire annealed, to the end of which is tied the sea-grass string; introduce the free end of the wire through the canula, push it forward, and with the finger in ano, bend the wire down until it protrudes through the sphincter, then draw out until the string is in proper position. This is better than the probe with an eye, as you could not readily disengage the wire from the eye. After that the process is similar. You need no anal speculum. This sea-grass string is rougher and a better cutter—arouses more inflammation than silk or linen, and the one I use I could use a dozen times without rotting. I write this because I see drawings of speculums, needles, and the parts engaged in the disease, in the journals, and knowing my plan is more simple, and easier adopted, I am induced to give it publicity.

The treatment of fistula in ano by ligature was the foundation of the reputation of a "quack," in Louisville, that should have

* If incomplete fistula, make it complete by an exploring needle or other sharp instrument.

been undermined by the surgeons there in six months. All that is needed is the introduction of the string; after that, the patient can daily gradually tighten it. I can most confidently recommend this mode of operating, and in cases of tuberculosis, as the cure is so slow, is accompanied by the usual discharge, and there is no danger from its repression, and needs only patience and attention on the part of the patient. I seldom anæsthize the patient, so rapidly and painlessly is the operation performed.—*Leavenworth Med. Herald.*

A New Remedy for Asthma.

The following extract from a letter lately received, makes mention of an addition to the *materia medica:* "Dr. P., of Lawrenceburg, Indiana, some forty years ago related to me, among other incidents of early frontier life on the Ohio, his experience of a novel remedy involuntarily taken. The doctor had from childhood been a martyr to asthma; it was the rock ahead for which he was continually on the lookout. One day—it must now be near seventy years ago—in traveling the rounds of a country practice, and while yet at a distance from any shelter, a storm of rain burst suddenly upon him. He rode at full speed for the nearest cabin, distant some miles, and reaching there, drenched to the skin and gasping for breath, he dismounted and made the best of his way to the door. As he entered, he met the inmates of the cabin rushing pell-mell out into the rain, holding their noses, and giving expression in every possible way to the most extreme disgust. He was not long in discovering the cause for their actions. The dogs had chased a polecat under the floor, and the whole atmosphere was loaded with its horrid effluvium. It was a choice between polecat and asthma, and Dr. P. chose the former and remained in the house. To his surprise the constriction of his chest began to disappear with the first inhalation, and in ten minutes he was free from every trace of the paroxysm. As soon as he could do so, he procured the musk-bag of one of the animals, and prepared an alcoholic tincture. The scent of this never failed to avert promptly a paroxysm of the disease; and ultimately the remedy, or time, or both combined, effected a permanent cure. He assured me also that he had successfully used it in similar cases to his own. Belonging, as it does, to the same class with musk and castor, but infinitely more active and efficient, if its odor be taken as a criterion of power, it may prove a valuable antispasmodic. I have seen cases of hysteria upon which, from a safe distance, I should have been delighted to witness a trial of its powers."—*American Practitioner.*

Cinchona Cultivation in India.

C. B. Clarke, Esq., officiating superintendent of the botanic gardens, and in charge of cinchona cultivation in Bengal, in his annual report to the secretary of the government of Bengal, makes some interesting statements relative to cinchona cultivation in India. Mr. Clarke thinks that cinchonas thrive best about two thousand feet above the ocean, and grow very well down to the rivers at eight hundred feet elevation. *Cinchona calisaya* grows best at similar elevations, but will not grow so high as *C. succirubra.* The only plants in the Rungbee plantations which are *above* four thousand feet elevation, are some *C. officinalis*, which are being tried at this higher level as a last experiment as to whether the species can be cultivated at all at Rungbee.

The manufacture of the crystallized sulphate of quinine now in general use, consists of two stages. The bark is treated with dilute acid, which takes up the alkaloids contained in it, and also a certain quantity of coloring matter, resin, and other rubbish, which quantity is considerable in *C. succirubra* bark, the only bark which for some years will be produeed in quantity at Rungbee. The acid infusion is neutralized by an alkali, when the quinine alkaloids are precipitated, accompanied with more or less of the rubbish. These precipitated alkaloids (more or less impure) are known as the first stage of the manufacture. The second stage is, in actual manufacture, generally performed by washing the quinine out of these precipitated alkaloids by strong alcohol, and evaporating the alcohol.

According to Dr. Broughton's cinchona report of August, 1868, the quinine alkaloids are valuable febrifuges, and operate pretty much as quinine, but are less powerful. Roughly, it may be said that two grains of cinchonidine are equal in all respects to one grain of quinine. The action of cinchonidine and the other minor quinine alkaloids is less satisfactorily made out, but in the *C. succirubra* bark usually 75 per cent. of the alkaloids present are either quinine or cinchonidine. If the precipitated alkaloids are dissolved in dilute sulphuric acid, the dose is equivalent to that of the crystallized sulphate diluted in acid. Several doctors of experience in the medical department of the government object that the crystallized sulphate is pure, and that they can be sure of the dose they give to a grain; whereas in the precipitated alkaloids the proportions of cinchonidine, and even more inert alkaloids, will be variable and doubtful.

Cinchonidine is about one-third the value of quinine, and its crystals are exceedingly like those of quinine. There is very little quinine in general use at present that is not deeply adulterated with cinchonidine. Should the production of precipitated alkaloids be carried on upon a large scale, it would be possible to thoroughly mix a large quantity, analyze a sample, and then issue it

with the percentage of quinine and cinchonidine certified on the labels of the bottles.

After protracted experiments, Mr. Clarke states it as his opinion the successful manufacture of quinine is not a particular secret, or the adoption of any particular routine, but is the result of the application of skillful manipulation and minute experience at each step and turn of the work.

The prunings and thinnings of this season are estimated to produce about 1,500 pounds of bark, of which nearly 1,000 pounds will be bark from wood three or four years old, the remainder from second year bark.

In the bark, from very young shoots, the quantity of resin present is large, and it must be dealt with by boiling in alkaloid water, notwithstanding the sacrifice of a percentage of the small quantity of quinine present, consequent upon the operation.

In regard to working fresh bark, Mr. Clarke says:

It has been stated that bark gives up its quinine more readily in a fresh state. I have tried the fresh bark and have not obtained a good result. I have little doubt that this failure was because my bark was not cut fine enough. Indeed, I could see that the dilute acid discolors the bark hardly one-fortieth of an inch deep. There will always be a great practical difficulty in working the fresh bark on a large scale. The fresh bark cannot safely be stored, as it soon ferments. Now the bark only "rises," that is, is fit for stripping, at certain times; so that in the factory, if we worked fresh, we should be compelled to provide a very large quantity of machinery indeed, so as to be able to take in hand, at once, the bark that would come in upon us irregularly in masses. By working it dry we can work it regularly at our leisure.

The number and distribution of cinchona plants in the government plantations at Darjeeling on the 1st of April, 1870, are stated as follows: Of all species, number in permanent plantations, 1,500,658; number of stock plants for propagation, 40,000; number of seedlings or rooted cuttings, in nursery beds for permanent plantations, 379,325; number of rooted plants in cutting beds, 340,127; number of cuttings made during the month, 2,000; total number of plants, cuttings, and seedlings, 2,262,110.—*Dep. Agriculture, July*, 1870.

Efficacy of Large Draughts of Pure Water in Poisoning.

The following note, taken from the works of Sydenham, is full of instruction: —

"I was called to a servant who had taken a large dose of corrosive sublimate. About an hour had elapsed when I arrived. His mouth and lips were already much swollen; he complained of violent pain and burning heat in the stomach, and was extremely ill. I ordered him at once to drink at intervals, but as speedily as

possible, twelve pints of tepid water, and that as often as he should vomit he should begin to drink more. I ordered also that, as soon as it should be perceived by the pains of the bowels that the poison was gaining the bowels, he should be given a number of injections of simply tepid water. The patient did as was ordered, and drank even a greater number of pints of water than ordered. The first vomits were extremely acrid, on account of the quantity of corrosive sublimate which they contained; those which he threw up successively, became less acrid with each successive ejection, until they became completely free. The colics which came on were tempered by tepid water clysters. This simple means was so successful that in a few hours the patient was out of danger. There remained only swellings of the lips and excoriations of the mouth, caused by the acridity of the poison contained in the water which he threw up; but by the use of milk, which I had him take as a sole nourishment during four days, he soon alleviated these symptoms. Ignorants give oil uselessly in such cases. As for me, I would prefer water to oil, and to all other liquids, for the reason that being easily taken in great amount, it seems better calculated to take up the particles of corrosive sublimate than all the other thicker liquids; for they are already impregnated with particles of other bodies." This fact, according to Dr. George, author of a work entitled "*Médecine des Campagnes à l' aide des substances usuelles*" (medicine of the country districts with additional means beyond the ones in general use,) proves that there is no substance, however caustic, that being diluted in a sufficient quantity of water, may not become inoffensive.

Water, then, attenuates the effect of poison and acts as a neutralizer. It fills, besides, the second indication of the treatment of poisoning, that which consists in promoting the elimination of the poison, whatever it may be. Thus this elimination is accomplished by four principal channels: the superior and inferior digestive orifices, the skin and the kidneys. But tepid water is emetic, cold water is diuretic. Why not then oftener resort than customary to this method, so simple and so happily put in practice by the learned Sydenham?

Water, remarks Dr. George, has the first virtue of an antidote applicable to all poisonous agents, and is available at all hours. We time and again read in the papers that a workman or other individual has swallowed, by mishap, a glass of aqua fortis, or a solution of copper, or a solution of sulphuric acid. While a physician is being hunted up, the poor fellow has died. In all these cases, absolute common water, cold or warm, taken in abundance, would suffice to neutralize the poison and save the victim.

The above is a means of saving life which cannot be made too public.—*N. O. Jour. of Medicine.*

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Original Communications.

ARTICLE I.—*Idiopathic Gangræna Genitalia in Infancy.* By JONATHAN W. BROOKS, M.D., Chicago.

The first case of this formidable disease which came under the observation of the writer, was that of L. H., on Sept. 10th, 1838, in a consultation with the late Prof. Worthington Hooker, of New Haven, Ct., and the late Joseph Peabody, M.D., of Buffalo, N. Y. Both gentlemen, at the time named, were residents of Norwich, Conn.

Prof. H. gave us the following history of the case: L. H., aged two years and one month, has been perfectly healthy up to eight days since, when her mother's attention was attracted by her languor, listlessness, want of appetite, haggard looks, and intense thirst. She was pale, and perspired very freely at night. On the 7th of Sept., the mother noticed that there was constant pruritus of the vulva and that she cried bitterly whenever she urinated, and directed the Prof.'s attention thereto. (Hitherto he had regarded the case as one simply of disordered digestion.) On examination, he found the greater labia swollen, spongy to the touch, of a shiny, leaden hue, with watery vesicles dotted here and there over the

internal and external surfaces. On the morning of the 9th, he found her crying out with pain in the parts, and some of the vesicles were ruptured and a dark-colored, offensive fluid exuding therefrom; he also found that night quite an intense fever. He applied a yeast poultice, with finely levigated charcoal intermingled, to the parts, gave bark and wine freely with opiates, hoping to find the little innocent's sufferings assuaged thereby; but, on the contrary, everything was intensified the next morning, and Dr. P. and myself were invited to a consultation at 6 A. M., which was the 10th of September. We found her in intense agony (and that hardly expresses her sufferings), with a pallid, contracted countenance, dry skin, rapid and feeble pulse, sleepless, and desiring to micturate every ten minutes, at each effort she screamed with pain. Several ash-colored spots had appeared, viz., one on the perinæum, one near the fourchette within the vulva, one near the clitoris, and two or three near the nymphæ. The whole external genitalia, the perinæum and anal region were swollen and spongy. It was difficult to touch the inner surface of the labia externa or the nymphæ without a bloody ichor issuing from the part touched. An offensive odor exhaled from the parts. The alvine dejections were not unnatural in appearance, but caused great suffering during their passage. The following was agreed on as the treatment to be pursued: Tinct. Ferri Chloridi, eight drops every four hours; one grain of Quinine in brandy every eight hours; and one and one-half grains Pulv. Doveri *pro re nata*, with a liberal allowance of milk punch, animal broths, etc. And a lotion of Tinct. Ferri Chloridi, ʒss. to ℥j. aqua destillat. 11th, found her much as on the 10th, and the treatment was continued.

The 12th, at our consultation, the sufferings were materially less. but the fetor was intolerable. There was a constant ichorous dirty flow from the vagina, and gangrene was advancing rapidly. With little change she went steadily downward for forty hours, and her sufferings were terminated in a protracted convulsion. At the autopsy, twenty-four hours after death, we found all of the genital organs, three-fourths of the neck of the bladder, and one-third of the lower portion of the rectum and anus, destroyed by gangrene, and both pubic bones much damaged. There was about two ounces of pale urine in the bladder. No blood coagula were

found in any part of the body. Nothing else was found that seemed unhealthy; and the examination was very thorough.

On the 28th of the same month Prof. H. was called to see J. H., in the same family, a little boy fourteen months older than L., and brother. Had never been ill from birth, but remarkable for vigor and activity up to ten hours preceding this, when his mother's attention was attracted by his feeble, listless, languid ways and haggard looks. A slight diarrhœa developed during the next three hours, but never became very troublesome. He commenced with Tinct. Ferri Chloridi, eight drops every five hours, bark and wine freely as he could take it. Milk punch *ad libitum*. That night he sweat profusely; after that, each evening there was a harsh dry skin, attended with fever; the urine was scanty, not high colored; the pulse rapid, not full. There was a shrunken, pale state of the surface, without sensible change until the third of October, when he began to complain during micturition. Prof. H. saw him immediately, and Dr. P. and the writer within three hours. At this time the left lateral half of the penis, scrotum and adjacent skin were of a deep, shiny, leaden hue. He was constantly disposed to scratch the parts. We advised a continuance of the tonics; and opiates *pro re nata;* also—

℞. Hydrochloric Acid dilut., - - - - ℥ j.
Aq. distillat., - - - - - - - ℥ ij.
M.

To be used constantly as a lotion to the parts, and to add one or two or even three drams of the acid to the water if it did not cause pain, which was done. This treatment was continued for six days with slight variations, and disease seemed to be held at bay and J. improving. At the close of the sixth day, without apparent cause he manifested much increase of pain in urinating and defecating, and in two hours after the opposite side became involved. In a few hours vesicles appeared on the part, and a universal gangrenous condition of the genital organs rapidly followed. As lotions, Hydrochloric, Sulphuric and Acetic Acids in their turns were used, diluted more or less with water, also Liquor Soda Chlor., also tonics of varied kinds, Chlorate of Potass., etc. The treatment at times seemed to hold the disease in check, yet after three weeks of the most intense suffering, he also passed away in a convulsion.

The autopsy, sixteen hours after death, revealed nothing more than in the case of his sister. The entire genitalia and also a large part of the pubic bones were destroyed.

Was requested to meet Dr. T., an old and highly esteemed practitioner, Sept. 15th, 1849, in the same neighborhood hurriedly to see an infant girl, sixteen months old. This case was a repetition of No. 1, and died on the eighteenth; had never been sick before, nor did a post obiit examination give any further light on the disease.

On Sept. 15th, 1853, was solicited to meet, in consultation, Dr. Connor, of Cincinnati, O., and Dr. Mount, of Cumminsville, in a consultation relating to the case of J. P., a little girl residing near Carthage, Ohio, twenty-three months old. Dr. Mount, the attending physician, reported as follows: The child has had perfect health until the 8th of September; on that day she was noticed as unusually dull, languid and feeble, without appetite, and sweating freely at night, which continued until the 12th, when he found her feverish, skin pale and generally contracted. Having regarded it as possibly a masked intermittent, he had given alterative doses of mercurials and from two to three grains of Quinine daily. During the 13th there was great apparent pruritus of the genitals. He directed a lotion of Carb. Soda in water. On the 14th she was evidently worse. On the 15th we found her feeble, haggard, crying out with pain, pulse one hundred and fifty and feeble, countenance hippocratic, the external genitals swollen, dark, shiny, spongy to the touch, and an offensive, dark, serous fluid flowing from the vagina.

The treatment adopted at this time was Tinct. Ferri Chloridi, ten drops every four hours, Sulph. Quinine, milk punch made with brandy *ad libitum*, and any nutriment else that the stomach would tolerate, also a lotion of equal parts of Sulphuric Acid and water. Treatment, however, was of no avail, and she died in a convulsion on the 17th. An autopsy revealed the parts in much the same condition as the first case related. In forty hours from death the whole body was very putrid.

Within the last month the writer has been in attendance on a similar case. The history, so far, may thus be summed up: M. N., aged two years and three months, never had been ill till September 14th from her birth, then her mother noticed her

as tired and feeble, looking dull, but did not give much attention to it until the 21st, when with pruritus vulva she also cried out with pain in urinating. On the 22nd the writer saw her for the first time. She had a rapid, irritable pulse, some fever at night, thirst urgent, the genitals swollen, of a leaden hue, with four or five small vesicles on different parts. Directed a diet of milk punch exclusively.

℞. Hyd. Cum Creta, - - - - - - grs. vj.
Pulv. Rhei, - - - - - - - - grs. iss.
Pulv. Doveri, - - - - - - - grs. ij.
Sacch. Lactis, - - - - - - - grs. jv.
M. Ft. chart., No. xij. Give one every four hours.

℞. Tinct. Ferri Sesquichloridi, - - - - ℥ j.
S. Give four drops in water once in four hours.

Also take equal parts Tinct. Ferri Sesquichloridi and pure Glycerine, and moisten a piece of soft linen with it and keep constantly applied between the labia, likewise a piece of linen several folds thick, moistened with the same and laid over the parts, changing frequently.

℞. Solution Citrate Potassa, - - - - ℥ ij.
S. Put one teaspoonful in a tumbler of water; use as a drink *ad libitum*.

At my visit the next day, the mother informed me that the pruritus ceased with the first application of the mixture. The vesicles had given place to excavated ulcers, and the mother informed me that a dark colored, gangrenous piece came out of each of them on the previous night, and that she had saved one. There was evidently no ground lost in the case. Directed a continuance of treatment, and bathing the parts with tepid water and Castile soap. On the next day the pulse was slower, the countenance less haggard, prostration slightly less, and the ulcers certainly no worse. Continue treatment. The next day there was improvement, and perhaps half a dozen healthy granulations had appeared. This treatment was continued to Oct. 8th, when the last ulcer was healed. Now (Oct. 12th) she seems pretty well, although pale and feeble. If she recovers fully, Mr. Editor, you shall be informed of it, as it will be the first recovery I have seen from this disease.

It will be observed that this fearfully fatal disease declared itself

without apparent cause in perfectly healthy children, all but one were little girls, and all were between one and four years of age. Neither of them had suffered from fever or eruptive disease of any kind, nor was any epidemic of any kind prevalent, or declared itself soon after, except in a single instance, and that was in 1849 when a form of choleroid disease prevailed, and that only among adults. The parents of all the children were very healthy. A singular coincidence was the commencement of each case in the month of September. I have seen partial gangrene of the genitals succeeding to measles, scarlatina, diphtheria and typhoid fever, but at the autopsy emboli were found in the supplying arteries of the parts. But there was nothing of the kind found in either of these cases; on the contrary, however, great fluidity and putrescence of the blood. With one exception, every case has proved fatal, and that I do not regard as exempt from danger. These cases seem to have been induced by a septic poison *sui generis*. Perhaps this will stimulate some one who has had a more successful experience in this direful malady to present their treatment to the profession.

55 South Clark Street.

ARTICLE II.—*The Result of Twenty-two Doses of Chloral Hydrate; with Cases, Observations and Gleanings, at St. Luke's Hospital.* By JNO. E. OWENS, M.D., Surgeon to the Hospital.

Dose 1, Case A. W. R., aged 47, in the last stage of phthisis, has been taking Morph. Sulph. gr. i; *pro re nata*. Last evening, (May 11th), being very restless, and in much pain and general distress, at 6 o'clock, Chloral Hydrate, grs. xx, were given. Within about fifteen or twenty minutes he began to doze, and at a quarter to 7 o'clock he was in a profound sleep. The respiration was not so frequent as when he was awake, the chin dropped, the eye-balls were only half covered, pinching occasioned no response, the arms became cold to the elbows; he could not be aroused, and remained in this condition about two hours, after

which he awoke, sucked a piece of orange, fell asleep again, and remained so, awaking for a moment once or twice, till 4 o'clock in the morning.

Dose 2, Case A. The resident, being somewhat timid, in consequence of the effect of the first dose, gave at 10 A. M., (May 12th), only 15 grs., which produced a calmness.

Dose 3, Case A. At 7 o'clock, P. M., 20 grs. produced sound sleep, but the patient was able to be aroused.

Dose 4, Case A. Chloral Hydrate, 20 grs., at 10 o'clock, A. M., (May 14th), caused drowsiness in 15 minutes. Patient died, May 17th.

Dose 5, Case B. May 18th, a young, delicate woman was admitted with typhoid fever, complicated with unusual cerebral excitement. She talked more or less incoherently, jumped from bed five or six times during the night, and as frequently through the day. At half past 7 P. M., the patient being wild and excitable, but easily managed, took Chloral Hydrate, 20 grs. In 15 minutes she became calm, in a half hour slept soundly, and passed a very quiet night.

Dose 6, Case B. May 19th, during the morning she was pretty quiet, and more or less drowsy, no inclination to get up. About 12 M., the patient becoming again restless, we gave Chloral Hydrate, 20 grs. She was asleep at 12.15, and did not get up during the night. Twice, however, she asked for water, and after drinking dropped off to sleep again.

Dose 7, Case B. May 21st, last evening 20 grs. caused sleep in five minutes by the watch. In ten minutes, so soundly asleep was she that the resident lifted her hand from the bed, felt the pulse and dropped the hand upon the patient's body without awaking her. Previous to the administration of the medicine she was wakeful, and staring wildly around the room.

Dose 8, Case B. In fifteen minutes after another dose (20 grs.) she became quiet, and remained so for two or three hours, after which the effect of the medicine had entirely passed away.

Dose 9, Case B. At 3 o'clock, P. M., the dose was repeated. It took effect in 15 minutes, but its influence continued only 45 minutes.

Dose 10, Case B. May 31st, patient being wakeful and ner-

vous, we gave 20 grs. at 8 P. M. She was asleep in 25 minutes, and slept nearly all night.

Dose 11, Case C. A large muscular man was admitted with stricture of the urethra. A day or two after admission, Chloral Hydrate, 20 grs., were given. The patient was not suffering any at the time. He was put to bed without supper, in a quiet ward, but did not sleep, and said that he did not feel drowsy. Dose was insufficient.

Dose 12, Case D. J. Q., aged 23, was admitted for partial anchylosis of the knee, the result of synovitis. There was slight dullness at the apex of the right lung, laryngitis supervened, the patient was feverish, and could not speak above a whisper. At half past 2 P. M., Chloral Hydrate, 20 grs., were taken, the patient being in bed. In 20 minutes he became excited. The excitement, which continued about 10 minutes, was similar to that produced by chloroform. This excitement was manifested by the patient's throwing his arms about, and by his expressing a desire to fight. Falling asleep in 35 minutes, he awoke in an hour, but in a few moments he went to sleep again and remained so for two hours.

Dose 13, Case E. A tall man with large frame and large joints, having been admitted, several days ago, with acute rheumatism, took Chloral Hydrate, 20 grains; negative result; dose insufficient.

Dose 14, Case E. Chloral Hydrate, 25 grains, were administered; negative result; dose insufficient.

Doses 15 and 16, Case F. A tall, stout young man was admitted on account of persistent hæmorrhage from the arm—the consequence of a stab received, in New Orleans, two months before admission. Upon cutting down close to the bleeding vessel, and applying the actual cautery, the bleeding ceased. The night of the operation he suffered much pain, for which he took Morph. Sulph. grs. ss., with negative result, although the pain was somewhat lessened. The second night, though the pain was not so great as that of the preceding one, Chloral Hydrate, 20 grs., were given, at 8 o'clock P. M. We waited an hour and a half, and seeing no effect from the dose, 40 grs. were administered. In thirty minutes he was asleep, and passed a very comfortable night, having been disturbed only to go to stool. He felt well in the morning, there being no headache, or nausea, and he ate a hearty breakfast.

Dose 17, Case F. Hand considerably swollen and very painful. At 11 o'clock last night, gave Chloral Hydrate, 40 grs. The patient was watched an hour. In 15 or 20 minutes he ceased to groan, and was sleeping soundly at the expiration of the hour. At the end of two hours he called the resident, telling him that the hand and arm were again painful. He very soon went to sleep, however, and passed the balance of the night in comfort.

Dose 18, Case G. A well developed and stout male patient, aged 23, above the medium height, was operated upon to-day (May 6th) for the relief of bony anchylosis of the elbow. For pain after the operation, the patient took Morph. Sulph. 1-4 gr., at 6 P. M.; negative result. At 7 P. M., the resident gave Morph. Sulph. gr. ss., a half hour after which he went to sleep and slept an hour, and then awoke with pain. At 9 P. M., we gave Chloral Hydrate, 30 grs. Ten minutes after taking this dose, he went to sleep, and continued to sleep well during the night. This morning, (Aug. 7th), upon awakening he felt well, had some appetite for breakfast, after which he occupied himself in reading.

Dose 19, Case G. Aug. 8th, at 9 P. M., the patient suffering from headache and pain in the arm, took Chloral Hydrate, grs. xxv, with negative result, both as to decrease of pain and the production of sleep.

Doses 20, 21 and 22, Case H. Dr. Hudson (Aug. 8th), the resident, aged 24, well developed and healthy, took Chloral Hydrate, grs. xx, at half past 10 o'clock A. M. At 11 A. M., he had experienced no change of feeling. At this time (11 A. M.) he repeated the dose, (grs. xx), ten minutes after which, he was somewhat excited, and experienced a warm, glowing sensation over the whole body, but more especially about the head and chest. The sensation was agreeable. In 20 minutes, the excitement was at its acme. He felt like one slightly intoxicated. At 11.30 A. M., being extremely happy, and concluding "to make a little heaven here on earth," he took a third dose, (grs. xxx). Five minutes after taking the last dose, the inclination to lie down was irresistible. Acting accordingly, he did not remember anything after touching the sofa, till 1.30 o'clock P. M., when some one aroused him for dinner. Both bells had rung, the patients had passed and repassed the office door, on their way to and from dinner, without awaking him. He went to dinner, feeling as well as

usual, and ate as heartily as he had done for a month. There were no after effects whatever. (The notes of Case F are almost entirely in Dr. Hudson's own words, taken from a letter written after he left the hospital.)

Ever on the watch for remedial agents to mitigate human suffering, both the surgeon and physician must hail with delight this new and fascinating hypnotic anodyne. Surer than opium and its salts, and unaccompanied by their unpleasant consequences—constipation, loss of appetite, profuse perspiration, mental hebetude, nausea and vomiting—Chloral Hydrate seems to be rapidly approaching a position unattained by any other drug of its class. Opium, for centuries the idol of the physician, the sheet anchor of the surgeon, and a blessing to mankind, has now a powerful rival. Discovered (Chloral) by Liebig, probably more than twenty years ago, it was first employed as a hypnotic and anæsthetic by Liebreich, of Berlin. Chloral is a colorless fluid, which should never be used in practice. Upon being mixed with water, however, it becomes the Hydrate—a white, solid substance, having an odor resembling that of ripe melons, and a somewhat caustic taste. It is the latter, in solution, that is used in practice. M. Personne's communications on Chloral, read before the Academy of Sciences, of Paris, point to its alternate transformation in the organism into formed acid and Chloroform, the latter being subsequently converted into Chloride of Sodium and Formiate of Soda—the products of its elimination. It is the alkali, alone, used in these experiments, which transforms Chloral into Chloroform. The theory of action, then, is that by the influence of the alkaline reaction of the blood, Chloral is changed into Chloroform, which produces sleep and sometimes anæsthesia. The sleep is more slowly produced than by Chloroform, lasts longer, and is not so frequently preceded by excitement. Chloral is most conveniently administered by the mouth. A much smaller dose is required by the hypodermic method, but as the dose that will kill by this method, has not, as yet, been determined, its administration in this manner is considered unsafe. M. Wamias, however, a surgeon of Venice, has not experienced any inconvenience after hypodermic injections of Chloral, and says that 15 grs., in double the quantity of distilled water, have acted speedily and excellently. This remedy seems to be contraindicated in the same cases in

which Chloroform is contraindicated, namely, in organic disease of the heart and brain. Dr. Richardson, I believe, recognizes only one form of organic heart disease, in which Chloroform is positively contraindicated, namely, a heart with its right ventricle dilated, and attended with bronchial cough and dilated veins. It is impossible to fix a uniform dose of Chloral. It ranges from ten to eighty grains. It is safe, in the adult, to begin with 20 grs., and increase five or ten grains *pro re nata.* I have seen very good results, in cases of pulmonary irritation, from ten grains three times daily. The dose is, in a degree, proportionate to the size and strength of the patient; a strong, vigorous man, above the medium height, requiring from ten to twenty grains more than one of ordinary strength and medium size. Liebreich may have entertained a hope of its rivaling Chloroform, Ether, and other anæsthetics, as used in surgery, but for this purpose Chloral is totally uncertain and dangerous. Any attempt to induce anæsthesia by the latter drug is wholly unjustifiable. It, however, promptly produces a stupor and sleep, which extends over considerable time with safety. It is used for sustaining sleep in the same class of cases for which Opium, Hemlock, Hyoscyamus, and Belladonna are commonly used, and we need only glance at the above cases in order to see how promptly and reliably it acts, and how free it is from uncomfortable after effects.

Doses 1, 2, 3 and 4, acted in fifteen to twenty minutes; doses 5 and 6, acted in fifteen minutes; dose 7, in five minutes; doses 8 and 9, in from fifteen to twenty-five minutes.

Dose 11, Case C. Nil. The patient was a large and strong man, requiring more than 20 grs.

Dose 12, caused excitement in twenty minutes, and sleep in thirty-five minutes.

Doses 13 and 14. Nil. A large man, requiring more than 25 grs.

Dose 15, Case F. Nil. A tall, stout man, requiring more than 20 grs.; but dose 16 (40 grs.) in case F, was followed by sleep in thirty minutes.

Dose 18, Case G. (30 grs), acted in ten minutes, after Morphia had, to a great extent, failed.

The most interesting case, that of Dr. Hudson, (doses 20, 21 and 22,) will speak for itself. None of these doses were followed by

constipation, loss of appetite, profuse perspiration, mental hebetude, nausea or vomiting. After several doses there was moderate gastric burning; after two doses, anæsthesia. The same care must be exercised in the administration of this remedy, as in other medicines of its class. Highly dangerous symptoms of depression have been produced by a dose of 50 grs. Dr. Post has told me of similar cases happening in New York. Where Chloral is impure it is without action, and is considered dangerous. Very recently we had a bottle of Chloral Hydrate that was moist and sticky. It was here and there of a sulphur yellow, especially the thinner masses that adhered to the inside of the bottle. With this specimen we never had other than a negative result, although it was used in doses as high as eighty grains. After examining the specimen, we of course discontinued its use. Again, the preparations of Chloral Hydrate should not be kept on hand too long previous to use, as they may, in this way, lose their efficacy. Liebreich, after some experiments, concludes that Strychnine, after a too heavy dose of Chloral, shortens and destroys the effect of the remedy, and without producing the injurious action which it exhibits in ordinary cases. He, therefore, proposes to employ hypodermic injections of Nitrate of Strychnine, as an antidote, in cases of the occurrence of accidents after an overdose of Chloral or Chloroform. M. Verneuil has presented a note to the French Academy of Sciences, in which he says that experiments having established the fact that Chloral is antagonistic of Strychnine, it might prove useful in tetanus. Subsequently, Liebreich reported a case of rapid recovery of this affection by the agency of Chloral Hydrate. Another case has occurred in Lariboisière Hospital, of complete recovery. The daily dose ranged from ʒ iss. to ʒ ij. There is also a third cure reported.

In the management of the nervous, Chloral Hydrate is an agent of great value. In a case of puerperal mania* in which Bailley's solution of Opium and Potass. Bromid. had failed, Chloral, (30 to 60 grs.) produced, in a few minutes, a complete cessation of all cries and struggles, and a return of calm consciousness, followed by a natural sleep of six or eight hours, and this probably saved the life of the patient. In the agitation which sometimes follows anæsthesia from Chloroform, Chloral

* Lancet.

Hydrate produces very happy effects. It is a calmer of general irritability, and an invaluable remedy in the treatment of neuralgia and delirium tremens. For neuralgia of some of the ramifications of the fifth nerve, we have found 20 grs., in the case of rather delicate females, act very promptly. In delirium tremens 40 grs. is a fair dose. It is said that, in children, about six years old, suffering from pertussis, 5 grs., two or three times daily, will mitigate the paroxysms; or, if the paroxysms are more severe at night, that six grains, at bed-time, will ensure a quiet night. Prof. Gross recommends it, in the treatment of strangulated hernia. Indeed, were we to enumerate all the affections or conditions for which Chloral Hydrate may be used with great advantage, we would encroach too much, perhaps, upon the pages of the JOURNAL. We hope, however, that a medicine so valuable will very soon be offered to the profession at cheaper rates, provided this can be done without any deterioration of quality, for Chloral that is not perfectly good and pure, is simply worth nothing.

ARTICLE III. — *Case from the Surgical Clinic of Professor Moses Gunn, of Rush Medical College.* Reported by H. F. CHESBROUGH, M.D.

[Continued.]

IX. On Saturday, May 21, S. A. H., of Wisconsin, presented a letter from Dr. H. C. Soule. He had come for relief from a tumor in the fauces. It was with great difficulty that he could make himself understood, the tumor presenting an almost total impediment to speech. He presented the appearance, every time he moved a few steps, of a man laboring under a severe attack of spasmodic asthma. His color was bad, face care-worn, figure stooping, and whole appearance that of a man who had long struggled against an incurable disease. Twelve years ago he had first noticed the tumor in the right side of the velum pendulum palati. At first it was of slow growth, gave very little trouble, and was not at all painful. But about three years ago the inconvenience became very great, so that he was forced to abstain from work entirely, because the size of the tumor prevented the ingress

of sufficient air into the lungs to allow of any exertion. Two years ago it began to interfere with his sleep, so that at last he could, according to his own account, only sleep for about two minutes at a time. The tumor would fall upon the rima glottidis, and, acting as a valve, cut off the supply of air; then he would awake, and this process would be repeated till the night was passed. Of course through these last years his food had been restricted to liquids. On requesting the patient to open his mouth, there could be seen a large dark red mass seemingly filling up almost the entire cavity of the mouth, pharynx and fauces. By pressing the tumor towards the right with the finger, the uvula could be seen far back and to the left, crowded against the wall of the pharynx. Exploration with the finger also determined that the attachments of the tumor corresponded exactly with those of the velum pendulum palati. On the left side the index could be swept along the lower free border of the tumor, but on the right side the finger failed to quite reach the extremity of the recess. The tactile sense showed it to be solid and elastic. The exploring needle brought blood only—but blood very freely. The mucous membrane covering it was very red and vascular, so that, judging from the appearance, the situation, and the free hæmorrhage, the diagnosis of soft cancer seemed very probable. On the other hand, the absence of pain, the long history, the slow growth and non-ulceration of the tumor, pointed equally as strongly in the opposite direction.

The diagnosis, therefore, was doubtful, with an inclination toward that of a benignant tumor.

The patient was informed of his danger. He was told that he would undoubtedly be suffocated by the tumor at no distant day if it was left untouched; that the operation might be difficult, dangerous and even fatal, but, if successful, would yield partial, and possibly complete relief. He was given the plain choice between letting the tumor alone, and certain death in the not-far-distant future on the one hand, and a dangerous operation with hope of great relief on the other. He took time to consider, and on Monday morning announced his intention of undergoing the operation. (He afterwards said that he came to Chicago with the intention of having the tumor removed at all hazards.) Tuesday, 2 P. M., was the time fixed upon. The patient was punctual, and

Dr. Gunn had provided himself with a charcoal furnace and three irons for the actual cautery. Dr. W. C. Hunt was also present, by invitation, with his microscope. An incision was first made into the substance of the tumor, and a portion of it removed and placed upon the slide of the microscope. Dr. Hunt immediately pronounced it fibrous. Dr. Gunn then commenced the operation with a curved, probe-pointed bistoury, sweeping from left to right close to and along the free border of the hard palate. He then endeavored to enucleate the tumor, and to his great satisfaction found this perfectly feasible. The patient was sitting in a chair facing the class, an assistant holding his head. He had so little space for breathing, that the additional room taken by the surgeon's finger completely cut off his allowance of air. In a few moments he threw up his arms as a signal of distress, and was given a short respite. A second time the operation of enucleation was continued, and a second time the patient was allowed a chance to rest and recover breath. A third trial now peeled off the greater part of the mucous membrane from the tumor, but when the surgeon withdrew the finger, the patient still threw his hands wildly about and rolled his head from side to side without drawing a single breath. Before the class had time to comprehend the difficulty, the operator plunged his index and middle fingers into the patient's mouth and lifted the tumor from its valve-like position on the rima glottidis, pushing the mass upward and backward with sufficient force to leave room for the admittance of air. After another short breathing space had been given, Dr. Gunn swept his finger swiftly around the remaining attachments of the tumor, and amidst the applause of the spectators, dragged out of the patient's mouth a mass whose size taxes severely the imagination to understand how it could have rested so long in its place. Its greatest length was 3½ in., breadth 3 in., and thickness 2¼ in.

The mucous membrane peeled from the tumor was very dark and livid, and seemed almost certain to slough off, but the next day, on the contrary, it showed evident signs of contracting and effecting a restoration of the velum palati. An abscess formed within the pharynx and broke in the course of the week, and still the two folds of mucous membrane kept continually closing upon each other. It was supposed that it would be necessary eventually to put a stitch in, to close completely the gap, so when the patient

went home at the end of two weeks he was told to return in six weeks for any operation which should then be indicated. At the end of that time he came back, his speech good, though not perfect by any means, the velum pendulum palati completely re-united, and the uvula in its natural position. He said he slept and ate perfectly well, and had gone to work soon after returning home, greatly to the astonishment of his family and friends, who had never expected to see him return alive.

There are a few points of especial interest in this case:

1. The situation of the tumor, no mention being made (as far as known) of a fibrous tumor in the vail of the palate.

2. The complete restoration of the velum pendulum palati.

3. The fact that the tumor was developed entirely in the right half of the velum (as proved by the integrity and position of the uvula) adds still more to the wonder at the restoration of the palate.

ARTICLE IV.—*Remarks on a Recently Discovered Mineral Spring at Portage, Kalamazoo County, Mich.;* together with the Qualitative Analysis thereof, in comparison with some European Springs of Celebrity. By EDWARD CLAPHAM, M.D., L.R.C.S., etc., Kalamazoo, Mich.

During the past few months there has been quite a temporary *furore* created in this section of our good State of Michigan, by the discovery of numerous mineral springs, endowed with high magnetic properties, and invested with wondrous curative powers. Perhaps nothing, since the discovery of Petroleum, has so similarly started people hunting for magnetic springs all over their lands, round about here, in the hope of realizing largely on their property should such a treasure haply be found. Various have been the samples of water brought me for an opinion or an analysis, but in few cases have they proved worthy of a second consideration. The public have become satiated alike with water and the vaunted efficacy thereof, which each spring was said to possess. But since this magnetic-spring fever has abated somewhat, it is proper to speak of one which has hitherto not been pushed into notice, other than by its merits as a remedial agency.

The spring in question is on the property of Mr. Durkee, of Portage, Mich, and issues from a hillside, sloping gently down to the bank of a small stream, being pleasantly situated amid a grove of handsome shade trees. Bath houses of a temporary nature have been erected close to the spot whence the water issues, so that the full benefit of the same is amply secured to the invalids.

The *external* application of this water appears to be decidedly sedative, from accounts I have received of it from those who have derived benefit, and may be due to the pretty large quantity of carbonic acid dissolved in the water, and also the salts held in solution by the same gas. The late Sir James Y. Simpson was the first to demonstrate the decided sedative action of carbonic acid gas, applied to various parts of the body, chiefly mucous or abraded surfaces, however; but there is no reason why a bath of highly carbonated water should not exert a very happy influence over cutaneous surfaces. Hence, to this agent (CO_2) we may attribute, I suppose, the relief experienced by many who have made use of the Durkee Spring in cases of rheumatic affections.

In its nature and composition this spring more closely resembles that noted one of "Spa," in Belgium, as will be seen at once from the respective analyses given below for comparison; and by a rather strange coincidence, prior to my acquainting Mr. Durkee with the result of my analysis of his spring, it had been remarked to him by one who had made use of it, that "it more closely resembled the celebrated European medicinal spring baths, than any he had seen since his return from Europe."

That this spring possesses some curative power, there can be but little doubt, as a glance at its composition shows, but as medical men, remembering the effects of mind on matter, and especially the value of free ablutions to bodies which, perhaps, have been neglected in this particular, we must accept the *marvellous* with the usual number of grains of salt.

The existence of an appreciable quantity of Bicarbonate Soda in this spring, entitles it, however, to some little consideration on our part, as also the large amount of Carbonate Protoxide of Iron, held in perfect solution, and therefore in a most agreeable and assimilable form perhaps.

These two bodies form the chief peculiarity of the water as medicinal agents, nor have they been found present as regards

the Carbonate Soda, or in as large quantities as regards the Iron, in any of the springs around here, which have been so highly extolled and quite a fuss made of them.

I regret that pressure of professional business and the lack of a pair of fine analytical balances just now, have prevented me giving your readers a full quantitative analysis of this rather interesting spring, for there is no doubt that under due and proper medical advice some benefit may be derived in chronic derangements of the skin, stomach, liver, kidneys and bowels, conjoined with various hygienic requirements which can be secured at the farm house near the spring, which is only nine miles from Kalamazoo, and conveniently reached twice daily by the Lake Shore and Michigan Southern R. R.

Analysis of the Durkee Spring.

Temperature at which the water issues from the earth, 50° Fah.
Specific Gravity, 1·005 at 60° Fah.

Carbonic Acid, *free*, considerable, but undetermined.
Sulphureted Hydrogen, *free*, traces.
Bicarbonate Soda.
Bicarbonate Magnesia.
Carbonate Lime.
Chloride Sodium.
Carbonate of Protoxide Iron.
Sulphate Lime.
Alumina.
Silica.
Organic matters.

Total number of grains of solid matter held in solution by one gallon of this water at 50° Fah., 26·25.

The quantity of *free* CO_2 is not unusually large, but considerable exists in a nascent form, holding in solution, at ordinary temperature, the saline and mineral constituents, NaO, MgO, CaO, and FeO.

Qualitative Analysis of the Celebrated Spring of "Spa," Belgium.

Temperature, 50° Fah.

Carbonate Soda.
Carbonate Magnesia.
Carbonate Lime.
Chloride Sodium.
Protoxide Iron.
Free Carbonic Acid Gas.

It will be observed that these spring waters are very similar and coincide in all important particulars, being of a saline and chalybeate nature, and furthermore it may be cited that if we except the difference of Oxyde of Iron and a few degrees of temperature, the Durkee Spring closely resembles the celebrated Thermal Spring, of Plombiers (France) a favorite and frequent place of resort of the late Emperor Napoleon the third, whose chronic malady found relief thereat.

By slightly raising the temperature by artificial means, Mr. Durkee is enabled to furnish a very pleasant and efficacious bath, equal to that of Plombiers, the analysis of which is given herewith.

Qualitative Analysis of the Spring at Plombiers, France.

Temperature, 90° Fah., (variable, however.)

Carbonate Soda.
Carbonate Lime.
Chloride Sodium.
Sulphate Soda.
Silica, and organic matters.

From personal experience of the Durkee Spring, I can only remark, in conclusion, that it is exceedingly pleasant and refreshing. Large quantities can be swallowed without the usual feeling of oppression or distension. I purposely pass over any allusion to the magnetic properties (so called) which the spring may have been found to possess, as I attach but very little importance to the phenomena of rendering knives magnetic by immersion in these springs as viewed in a medical light.

I have my own theory as to the frequent discovery of these pseudo-magnetic springs, which is, that owing to a large extent of bog iron ore, stretching away from Canada down as far as our peninsula of Michigan, and this is well known to possess magnetic properties (having specimens in my own mineralogical cabinet) there is no wonder at the development of magnetic phenomena, or of the large quantity of iron found, in these springs at their source. Capital has been made (or attempted) of this imponderable agency in connection with the various springs, but it is somewhat remarkable that in curative results, the Durkee Spring, itself possessing scarcely any magnetic properties, has wrought more than any others which vaunt their magnetism.

This spring water is decidedly diuretic and aperient, also perceptibly detersive in its action on the skin as well as in cleansing textile fabrics.

From persons of veracity I have heard many accounts of its sedative influence upon limbs as well as other parts of the body generally, which being undeniable can only be referred to the presence of appreciable quantities of alkali (NaO) in a highly carbonated form ($=^2 CO_2$) and on this account, therefore, externally, in conjunction with its *aperient* and *anti-lithic* effects internally, I was led to believe that my professional brethren might wish to learn some particulars as to the relative character and composition of this rather interesting spring, which may haply attain celebrity some day, but which at present may only excite the action of "musculi risorii, Santorini nostri," with the accompanying remark, "bibat qui vult."

P. S. The analyses of the "Otsego," "Eaton Rapids" and "Collins" springs having already been made public, I have not deemed it necessary to reproduce them here, as comparison, if ever odious, would be so in this case especially.

ARTICLE V. — *Bromide of Potassium in Leucorrhœa.* By A. H. KINNEAR, M.D., Metamora, Ill.

What I have to say, upon this subject, may not be altogether new to the profession at large, but as I have seen nothing of the kind in the medical periodicals, I have deemed my experience sufficiently interesting to warrant me in laying it before the readers of the JOURNAL.

Some two years ago, I was treating a case of leucorrhœa of some two years' standing. The remedies that I was prescribing in the case, were those that are usually recommended in works on Gynæcology, but after a fair trial of them, and failing to meet with the success I desired, I determined to change my treatment. A little previous to this time, I had occasion to prescribe Bromide of Potassium to a gentleman who was, and had been for a long time, troubled with gleet; but the prescription was given to procure sleep and allay nervousness. The prescription was continued for one week. At the expiration of this time he reported to me, and asked if I intended that medicine to cure the gleet, which he said it had accomplished. From this circumstance I was led to believe that it might be a valuable remedy in leucorrhœa, and, in fact, in all diseases of the genitalia, more particularly such affections as result from congestion of the mucous membrane of the genital tract, and as I had a case on hand which would test its virtues, I immediately prescribed it to my lady patient—twenty grs. in solution, twice each day, thirty minutes after meals. In ten days' time my patient reported herself as feeling much better; the discharge was lessened, she could sleep better, appetite was improving, and, in fact, there was decided improvement in every particular. I continued the prescription four weeks longer, omitting it occasionally for a short interval on account of the stomachic irritation it produced. At the expiration of this time all symptoms of her complaint had disappeared, and up to the present time she has had no return of the affection.

Since that time I have kept notes of twelve marked cases of leucorrhœa, none of which were of less than six months, and some of two years, standing when they applied to me for treatment. The prescription in each case was Bromide of Potassium in solution, the dose according to the severity of the case, and two

months being as long as the treatment was required in any case. The majority of the cases yielded to the treatment in four weeks.

I found that it mattered not whether it was vaginal or uterine leucorrhœa; both seemed to yield with equal readiness to the remedy. I am satisfied, from the short experience I have had, that Bromide of Potassium will give better satisfaction in arresting this trouble, and all kindred complaints, than any remedy we have. We obtain, as it were, two effects from the use of this drug: the alterative and nervo-sedative; producing a marked sedative effect upon the genital organs; allaying all irritation of the parts, in fact, putting them at rest; thus giving the medicine every chance to produce its alterative effect on the parts diseased.

The question may arise in the minds of some of your readers, was it not necessary to give tonics in conjunction with this medicine? I found that in the majority of the cases the Bromide of itself soon created sufficient appetite for all the nourishment that was necessary in the case. In administering this remedy in leucorrhœa, the dose must be large enough to have a marked impression on the system, or else it will be liable to fail in accomplishing the desired effect.

Selections.

On the Value of a Large Supply of Food in Nervous Disorders.

Among the various therapeutical agents and innumerable drugs advocated and employed for the relief of nervous weakness, and the cure of the disorders which thence arise, it is possible that the unaided effects of food may not in all cases have met with the trial they deserve. Patients thus affected are told to live well and adopt a generous diet, but the generosity of this is usually estimated by the amount of port wine or other alcoholic stimulant, rather than by that of the bread, mutton, or beef.

Certain chronic invalids who have been brought under my notice, have been lifted out of their former condition of "nervousness" by a large increase in the quantity of their food. They have been people suffering from some general neurosis, taking the

form of an insanity of a low and depressed character, or hypochondriasis, hysteria, alcoholism, or neuralgia, affections closely allied one to another, which may be witnessed, in one form or another, in individuals inheriting the same neurotic temperament. We may see different members of the same family displaying, one insanity, another neuralgia, a third hypochondriasis, while the conversion of one variety to another is a matter of every-day observation.

A paper on "Indiscriminate Stimulation in Chronic Disease," from Dr. Anstie's pen, appeared in this journal in July last. With all that he says I cordially agree, and more on this portion of the subject need not be urged at present. It is a matter of the gravest importance that the treatment of such cases should not be conducted by means of unlimited supplies of alcohol.

If we inquire into the past history of nervous patients, and have the opportunity of learning accurately the facts thereof, we often find that for a considerable time the supply of daily food has been in no degree adequate to the necessities of the individual. Here is a common case. A man somewhat past middle life, but whose years do not imply senile decay, becomes unfit for business, fidgety, irritable, depressed, or even melancholic to the extent of insanity. We hear that he has been a hard-working man of business, always nervous, and very probably an indifferent sleeper. Being most heavy for sleep in the morning, he has risen at the latest moment, and, snatching a mouthful of breakfast, has hurried off to catch the train or omnibus, worried and anxious lest he fail to reach his office at the hour appointed. At lunch-time, if he be really hard-worked, he takes, not a meal, but a sandwich or biscuit, eaten perhaps standing, and often bolted in so great a hurry that digestion is difficult; he tells us that he dare not take more of a meal in the middle of the day, for he would be rendered unfit for the remainder of his work. In the evening, with what appetite he may, he eats his dinner, perhaps not before half past seven o'clock. Now, granting that his dinner is amply sufficient, such a man lives on one meal a day with very little besides. These are the persons who cannot go on without frequent holidays; nervous by inheritance, they break down because they are insufficiently fed. A holiday, during which they live better, builds them up again for a time, again to break down; often to fall into the condition above mentioned. Another class among whom we may frequently witness the same result and corresponding symptoms, are the clergymen, who, for various reasons, deny themselves an adequate amount of food. Either they fast rigidly, according to the rule and doctrine of the day, often allowing some hours to elapse before they break their fast, or they think that hearty eating is a snare and a carnal enjoyment, or they hold it sinful to eat their fill while others are in want. Whatever the cause, certain it is that many

of the clergy break down in one or the other of the forms of nervous disorder already enumerated, and an enlarged dietary is to them a necessity. A vast number of women, for one reason or another, take a very small supply of food: some think it unladylike to eat heartily; some eat on the sly, and when this is not practicable, go without. Many from the lives they lead are doubtless correct in saying they cannot eat because they have no appetite. These stay in the house from month to month, or never venture beyond the door except in a carriage, because ladies do not walk in the streets. Others have misgivings on the score of their digestion. Like many women who lead sedentary lives, and habituate themselves to passing long periods without action of the bowels, they suffer greatly from constipation, which is looked upon as an indication and a warning that they ought not to eat. So they starve themselves, and fancy that if they abstain from food it is of little consequence whether they pass a motion once a week or once a fortnight.

It may be well to consider somewhat more in detail the various neuroses which have been mentioned.

The first on the list is low nervous depression, commonly known as melancholia, the most formidable of all that have been named, the one most likely to run in a short time into serious and even fatal insanity, but which, if arrested at an early stage, is often singularly amenable to treatment. In almost every example of this variety, and almost from the commencement, we find a marked disinclination to take food, and in extreme cases it can only be administered by some kind of forcible feeding. In milder cases, and at an early period, it will be taken if we insist upon it, and the result of a large supply is frequently manifested in a very brief time. It has been frequently asserted by many writers, that refusal of food on the part of melancholic patients is due to dyspepsia, and in confirmation of this opinion they point to the foul and furred tongue, the obstinate constipation, and the fœtor of breath so constantly observed in such patients; but this condition of the tongue and fœtor are due, I am convinced, not to gastric disturbance, but to the generally depressed and devitalized state of the individual; and the best proof of the absence of dyspepsia is that, although we suddenly compel the ingestion of what, compared with that previously taken, may be called an enormous quantity of nourishment, the stomach by no means rejects it, but, on the contrary, retains and digests it, as is shown by the rapid amelioration which takes place. It is inconceivable that dyspepsia can be the cause of refusal of food when the administration of it is unattended by sickness or inconvenience, even when that which is taken into the stomach is not light invalid-diet, but such substance as beef or mutton. From my own observations, and from the subsequent confession of patients, I am inclined to believe

that the refusal of food is in almost every case the result of delusion, this being in turn the result or interpretation in consciousness of the extreme nervous depression and exhaustion under which they are laboring. They are too wicked to live, too wicked to eat; it is sinful to pamper their flesh and their appetites; they beg for cold water and dry bread, but the idea of a good dinner their soul abhors. If we see such sufferers at an early stage when forcible feeding is not necessary, and they will take that which is ordered, merely protesting against the uselessness or wickedness of the proceeding, we may prescribe a very large amount of food without fear, nay, with a constant expectation of the greatest benefit. What the food is to consist of is a point on which little need be said. It is not necessary to adhere to a sick diet,—to beef-tea or boiled mutton, to essences of beef or Liebig's food or any other of the concentrations so loudly recommended. The ordinary diet-list of the individual in health may be given without hesitation—fish, game, poultry, meat, puddings, and the rest. His appetite should be stimulated by variety, and his dishes may be savory as well as wholesome; but the supply must be large. Such patients for the most part have accustomed themselves to eat during the day a scanty and insufficient amount, and we shall be told that latterly they have not taken half their usual quantity. It is not too much to say that they require double that which they have so long taken; and as we shall not be able to induce them to eat double the quantity at a single meal, it will be necessary to multiply the number of the meals. Instead of breakfast, lunch, and dinner, two of which have probably been but the semblance of a meal, we may institute a series of feedings after this kind: First, something may be given early in the morning, before the patient gets up, as rum and milk, egg and milk, chocolate or *cafe au lait*. This will be useful in allaying the feeling of extreme depression and dispelling the gloom and suicidal thoughts so constantly present on first waking. Next, breakfast may be taken, after dressing, and between it and two o'clock lunch something else, as beef-tea or a sandwich. The dinner hour should not be later than six, and at bedtime some light kind of supper should not be omitted. By this kind of division, food may be administered six times in the day; and if the patient wakes in the night, and is restless and nervous, and disinclined to sleep again, food, taken even in small quantity, will often bring back sleep. With all the food may be given a reasonable amount of wine, or wine and stout, and this not by way of curing the disorder by stimulants, but because in conjunction with them less food appears to be required, and also because the addition of some wine or beer often renders the taking of the food more easy to the patient.

Now the latter, and it may be the friends, will protest loudly that it is impossible to take this quantity; he will assign every

conceivable reason for avoiding it; but if we are firm and insist, and, if necessary, cause him to be fed with a spoon, he will retain and thrive on it, and in a few weeks, or even days, will show very marked signs of its good effect. Patients have recovered under this treatment in a singularly rapid manner. Some learn in a short time to appreciate the benefit of the food, and miss their meal if from any cause they are unable to take it at the appointed hour, and some have gone on for years after their recovery, taking, not the quantity prescribed during the acute stage of their illness, but one very much larger than that on which they had endeavored to live for so long, and under such a change of regimen have lost all trace of the depression and hypochondria from which they formerly suffered. Although beef-tea, chocolate and milk have been mentioned as articles of diet, it by no means follows that liquids are to predominate; on the contrary, solid food is far better as sedative, and also far more nutritious, and it may be taken as in health. Much has been said concerning the advantage of fatty food in nervous disorders, and sugar has been thought to disagree with these patients; but in my own experience I have found that all the various foods—the fatty, the starchy, sugar and meat—may be given in due proportion at any rate to the individuals now under consideration. If this amount and description of diet be administered, there will be little need of medicine, except perhaps of Morphia or Chloral to procure sleep at the commencement of the treatment.

The next variety of neurosis in which the efficacy of abundant food is markedly shown, is alcoholism, whether acute or chronic. I shall not here enter upon the question whether delirium tremens is ever caused by the removal of alcohol; controversy upon this point is not yet at an end, and it will exist so long as we are ignorant of the precise pathological cause and condition of delirium. But whether alcohol is to be entirely avoided or not in the treatment of this disease, it is, I believe, an established fact that abundant nourishment, not spoon diet, but solid food, should be given as soon as the stomach can retain it. The irritability of the latter is a difficulty to be met in various ways, and owing to this we may at first be obliged to resort to concentrations of food—Liebig's extract, various preparations of beef-tea, and so on. It would appear that sleep is far more easily procured, and that medicines given for it are far more efficacious, if an abundant supply of nourishment is administered at the same time.

It is rather, however, in chronic alcoholism that the good effect of food may be witnessed. Here it is often of the greatest consequence to abolish alcoholic stimulants entirely; in fact, in such abolition lies the only hope of effecting the reformation of the chronic drinker. The intense sinking and craving for the

accustomed stimulants may often be effectually met by food, especially if a small quantity be given frequently, as recommended already. Such patients are unquestionably most difficult to deal with; they assign reasons of all kinds for rejecting food, and for being treated by their favorite remedy. They are faint, they require support, they suffer from stomach ailment, from pain, from want of appetite, nausea, or sinking; but they rarely vomit that which they take if drink is withheld, and this is a tolerably sure sign that the stomach is equal to the digestion of the food. The symptoms of alcoholism need not be here described; but whether they be the transient and immediate results of a heavy debauch, or the grave signs of commencing degenerative change of the nerve tissues, which runs to alcoholic paralysis, epilepsy, or dementia, food is equally demanded, and is in fact the one thing which can arrest this degeneration by supplying nutritive elements in large quantities. The recovery in such cases is often astonishing. I lately saw a young man who for many weeks was completely paraplegic, but who nevertheless entirely regained the use of his limbs. The recoveries, too, from alcoholic dementia are often equally surprising; in fact, there seems scarcely any state from which recovery may not take place if the disease has not existed for a long period, and if we are able to withdraw all alcohol, and administer nourishment in large quantity.

There are a number of people whose nervous temperament displays itself in symptoms which are called, in common parlance, hysterical, or hypochondriacal. While young they are termed hysterical, especially if they are women; when older, they are known as hypochondriacs, and their nervousness then takes, for the most part, the form of depression and anxiety, or even suffering on account of some fancied bodily disorder. Now, although hysteria is held by some to be peculiar to women, and discussions are raised as to whether the seat of it is in the womb or the ovaries, or elsewhere, it is, I think, a fact that there is the closest connection between these two neuroses; that the condition of my patients would be as well described by the one term as by the other, and that the subjects of both the one and the other may be of either sex.

Few of these will be found to take an adequate supply of proper food, and those who take the least will present the most distressing symptoms of their disorder. The hypochondriacal direct their attention to the digestive organs more frequently than any other region. They suffer from constipation, flatulence, and a host of other evils, and for this reason either shun food, or eat most unwholesome and extraordinary combinations irregularly or at long intervals. Hysterical women—I am now speaking of young girls—are especially prone to eat irregularly; to take food, if possible, when unnoticed; to eat altogether a very inadequate

quantity, and to eke it out by an inordinate proportion of stimulants. If we look at such, especially hypochondriacal, their whole aspect betokens innutrition. Often they are miserably thin; if they are given to drink they may be fat, but their flabby tissues speak of low organization and defective power. It is evident that the nervous energy of such people is very low; this is manifested by their mental depression and disturbance, and the defect must be supplied from some quarter or other. But whence can a supply of force come except from the material of food taken into the system by the alimentary organs? Moral measures are, it is said, and said truly, essential to the recovery of such persons. But moral measures constantly fail, because the bodily health does not allow of mental improvement, and is not *pari passu* attended to. As in more marked mental aberration no amount of argument, proof, or moral suasion will expel a delusion which vanishes of itself when bodily health is renovated; so change of scene, change of persons, and moral treatment of every kind, will fail with the hysterical or hypochondriacal so long as they try to live upon physic or alcohol, or upon a diet almost devoid of nutritive elements.

It may be objected, that some hypochondriacal patients eat, not scantily, but enormously, taking more than is necessary for a person in health. Such are to be found, but in my experience they are the least to be pitied of their class. Though nervous about themselves, and prone to take notice of the slightest indication of anything they may think an ailment, they are not generally depressed or unhappy, but after a fashion of their own, they exert themselves and enjoy life. Such people, I believe, take this amount of food from a feeling that it is to them a necessity, and thus they keep at bay the graver nervous disorder which perpetually threatens them, and the matter of alcoholic stimulants they rarely exceed. Food is to them a stimulus, and were it withdrawn they would speedily show signs of more serious mental mischief.

The other subject on which I propose to say something is neuralgia. It is obvious that any observations upon it must be of the widest and most general character, and that no account can be taken of the special forms of this neurosis, or of any pathological changes connected with it. Believing with many others that neuralgia is one manifestation of impaired sensibility, as other neuroses may be displayed in mental symptoms, and in these alone, I think that the radical cure and not the mere alleviation, is to be found in many cases in the supply of a large amount of nutriment to the nervous system. The confessed failure of drugs in the case of neuralgias, and the mere temporary alleviation by such methods as hypodermic injection, inhalation, or a dose of alcohol, point to the necessity of some more general mode of treatment, which shall effect a greater change in the functions of the

nervous system. Those whose experience is greater than mine speak highly of the utility of fatty food, of cod-liver oil, cream, butter, and the like. Whatever the form of food specially indicated, it generally will be found that the entire amount requires to be increased, and that the quantity taken for a series of years has been deficient. It may be that the alimentary system of elderly persons will be found incapable of assimilating the requisite amount. On the intractable nature of the neuralgias of the aged, nothing need here be said.

With two remarks I will conclude. First, in all chronic forms of neurosis, alcoholic stimulants in any but the smallest quantity are a hindrance rather than a help—or productive of evil rather than of good. Secondly, in such disorders the fear, so commonly entertained by both doctors and patients, of "overloading the stomach," producing "biliousness," and the like, is in the majority of cases not realized when the plan of administering food in large quantity is tried. Great opposition will be offered by patients, and every kind of evasion attempted. They will swallow bottles of medicine far more willingly than they will eat sufficient meals at regular intervals. To induce them to do this is often a difficult task, and here moral handling is required. If this is judiciously applied to the patient and the patient's friends, some very remarkable results may be attained.—*The Practitioner.*

Importance of Proper Alimentation in Health and Disease.—Read before the Sacramento Medical Society, by Augustus Trafton, M.D.

In attempting to elucidate the importance of alimentation in its various relations to the human body, I feel a diffidence that is inspired by a consciousness of my inability to do justice to so important a subject. I shall therefore beg the indulgence of the Society while I read these few hasty and incomplete notes; not so much with a hope of instructing, as a desire to awaken attention and provoke discussion on this important subject. Aliments may be defined as all substances which are absolutely required to repair the waste of the animal body, to supply materials for its growth, and to maintain all the various functions at a healthy standard. That the power of self-regeneration is one of the most distinctive properties of the human body, is a fact evident to the most careless observer. This regeneration consists in the incessant molecular change incident to and dependent on the absorption and assimilation of aliment of various kinds. Its activity

may be checked or hastened by various conditions of the system, but it cannot be completely arrested during the continuance of life. In well-nourished individuals the blood contains all the elements necessary for the regeneration of the various tissues of the body; but owing to the constant physiological decay of the organism the blood soon becomes impoverished, and it is necessary to supply the proper material for a new supply of blood, which process involves the ingestion of various articles of food and drink.

In health the wants of the system are made known to us by a sensation of hunger or thirst. Hunger probably has its origin in the stomach, and is transmitted to the brain probably by the pneumogastric nerve: I say probably, because it is not certain that the sensation is produced in the stomach, but it may be a general feeling of want produced by the lack of material in the blood to supply the waste of the system; and we refer it to the stomach, because of its proximity to the heart and large blood-vessels. It has also been demonstrated by at least one observer that section of the pneumogastric nerve does not destroy or abolish the desire for food.

The demand of the system for water is much more urgent and annoying than the desire for food. This sensation, unlike hunger, is never agreeable, and when prolonged abstinence from drink is practiced, the thirst becomes painful in the extreme. The blood becomes thicker, and all the secretions are diminished. Death takes place much sooner in consequence of the privation of fluids than where only solid aliments are denied.

Inanition is that condition of the system produced by total or partial privation of proper aliments. If food be improper in quality or insufficient in quantity to nourish the system, the same effect is produced; or if the organs proper for the digestion and assimilation of food be in any way prevented from performing their normal functions, the regeneration of the blood is prevented and the tissues are starved in consequence, although food may have been taken into the stomach and passed through the alimentary canal. One of the first and most notable consequences of inanition is a *loss of weight;* the body loses its fair proportions day by day in a regular, progressive manner, long after the process of reparation has ceased in most of the organs.

Death occurs when a certain point is reached, with a great deal of regularity; ordinarily occurring when the body loses about four-tenths or five-tenths of its normal weight. The fatty parts are first affected, and completely disappear. According to a table prepared by Chossat, the fat, blood, spleen, pancreas, liver, heart, intestines, and muscles of locomotion, lose more than four-tenths of their weight before death takes place. The following organs lose in the order in which they are named, less than four-

tenths at the period of dissolution, viz.: stomach, pharynx, and esophagus, skin, kidneys, respiratory apparatus, osseous system, eyes, and nervous system. The brain is probably the last organ to suffer, and loses the least in weight.

Temperature, age, sex, exercise, light, moisture, and the passions, all exert an influence more or less marked on the process of nutrition, increasing or retarding, as the case may be, the development of the tissues of the human body. The blood changes its appearance during the progress of starvation most notably; it is impoverished to an extreme degree, and finally refuses to circulate in the capillary vessels of the skin and some other tissues. The heart's action is sensibly diminished in power and frequency, as a rule, in proportion to the diminution of the temperature of the body; being reduced to thirty or forty beats per minute when the temperature has reached 75° or 80° Fahr. The amount of carbonic acid exhaled is diminished, and the number of respirations is generally decreased, while the breath becomes extremely fetid; the muscular movements slow and uncertain; the voice weakens to a whisper, and memory resigns her seat.

These are some of the phenomena of inanition, occurring in a healthy subject. If such be the case, the neglect of proper alimentation, when the body is prostrated by disease, can but be greatly injurious. Insufficient alimentation during disease is a cause of death, which is often overlooked because of its silent and insidious advances; the patient having no desire for food (owing to his blunted and imperfect sensibility), often neglects or refuses to take sufficient nourishment, and finally succumbs—not so much to the disease as to the lack of proper aliment. Too much food, although injurious, is generally tolerated by the system, and disposed of through some of the excretory organs; but too little food produces a condition that can never be remedied, the system having no power to make up a deficiency. Whenever the waste of the body goes beyond the supply, death is the inevitable consequence. It may be slower, but not less sure, than when all supplies of food are cut off.

Having shown that death takes place from inanition when we deprive the human subject of a proper quantity of nutritious aliment, it will not require much argument to show that persons not in a healthy condition must have proper food in sufficient quantities, not only to enable them to live, but to be able to resist the tendency to death produced by the malady or maladies with which they are afflicted.

I have already defined *alimentary substances* to be such as are absolutely required to repair the waste of the body, to supply materials for its growth, and to maintain all the functions of that body at a healthy standard. In this list are included articles from the animal, vegetable, and inorganic kingdoms, susceptible of

division and subdivision into many classes: the most important are organic, nitrogenized principles from both animal and vegetable kingdoms, viz., albumen, fibrin, musculine, caseine, gelatine, gluten, legumine, etc. Of the non-nitrogenized articles of diet, sugar, fat, and starch, are the principal. Various inorganic substances are required to be ingested or inhaled, as water, air, chloride of sodium, iron, phosphates, lime, and sulphates. The proper amount of food containing the above elements necessary to support an average adult man, varies very much in different circumstances. Temperature is probably one of the most powerful causes of variation, as it is well known that persons living in high northern or southern latitudes will consume an amount of food sufficient for the sustenance of a large family in more temperate regions. The ingestion of alcohol, coffee, tea, tobacco, and some other substances, will, by arresting the elimination of various matters excreted from the body, retard waste, and thus enable a smaller amount of food than ordinary to support the body for a limited period of time. Probably the most correct estimate of the amount of food necessary for the sustenance of an adult, is to be found in the daily rations of the American soldier. We are told that 22 oz. of flour, 20 oz. of beef or 12 oz. of bacon, 16 oz. of potatoes (three times a week), 1½ oz. of rice, coffee ½ oz., beans 1 oz., sugar 2 oz., with a sufficient quantity of salt, and water *ad lib.*, are amply sufficient to sustain an average soldier during the most arduous campaign; and, in fact, there is no reason to doubt that in a temperate climate like ours such rations are amply sufficient. In proof of this, the excellent physical condition of our army, the amount of labor performed, the extraordinary percentage of recovery from capital surgical operations, may all be cited to show the army ration to be sufficient.

But how shall we arrive at a proper estimate of the amount of food actually required to support a sick man—one who is unable to sit up or take any active exercise at all? This is a problem more difficult of solution. In most instances the patient has no desire for food: shall we infer from this that no food is needed?—that no food would be digested if taken into the stomach? I think all will sustain me if I answer this question in the negative.

That point having been satisfactorily disposed of, the next question which naturally arises, is, *what kind* of food? How much can be given with benefit? With regard to the first question, I think the proper aliment for a patient cannot be arbitrarily prescribed; so much depends on the nature of the disease, the various organs implicated, the idiosyncrasy of the patient, and many other things that can only be determined by the closest scrutiny of the patient at the time.

As a general rule, when the anorexia is complete we may suc-

ceed in getting our patient to take small quantities of milk, beef-tea, egg-nog, and some of the lighter farinaceous articles of diet, as tapioca, arrow-root, corn-starch, etc., if we prescribe them in certain doses at regular intervals. The second query, as to how much of the above articles of food may be given with safety and benefit to the patient, it is sometimes very difficult to determine. I believe, as a rule, patients are not fed enough. If any of the secretions are abnormally increased, and rapid emaciation is destroying your patient, it will generally do to increase the amount of milk or beef-tea to a pint or two in twenty-four hours —and in such cases alcohol in some shape will generally be found useful. (In such cases I prefer good whisky to any other form of stimulus.) Of course the patient should be well supplied with fresh air by thorough ventilation of the apartment, and a sufficient amount of cool water is always necessary to the well-being of the patient, whether asked for or not. A little water should be given every hour, or oftener.

When from any cause the stomach persistently rejects the aliment offered, or any mechanical obstacle to the administration of food exists, enemas of beef tea and gruel may be used with good effect, and in some instances baths of milk, or other nutritious fluid, would add to the nourishment of the patient. Nutritive fluids might even be injected hopodermically as a *dernier ressort*, when food could not be retained by the stomach or rectum sufficient for the support of the patient. As soon as the patient begins to convalesce the food should be varied as much as possible, as no single article of diet contains all the elements necessary to a successful building up of the body. The appetite now comes to our aid, and suggests to the patient many articles of diet from which we may select an unobjectionable bill of fare.

In many instances a proper regulation of the kind and quantity of food becomes necessary as a prophylactic; for example, in tuberculosis. The patient presents all the signs which denote the existence of a scrofulous diathesis; his habitation is in a cellar, perhaps; his food, scanty in quantity, and poor in quality, is illy suited to sustain a healthy individual, much less to enable a scrofulous person to ward off the deposition of tubercle, which sooner or later generally occurs in such habits when poorly nourished. Now this person may not need medicine; in fact, no remedy would prevent his early demise so surely and pleasantly as a change of aliment. Remove him from his cellar; in its place substitute the open country; give him suitable employment, plenty of air and nourishing food, and you have succeeded in rescuing one victim from consumption—that fell destroyer of the human race, whose march has hitherto been scarcely interrupted by the best means the whole medical faculty have been able to devise.

In dyspepsia, that hydra-headed demon of disease, which seems to have chosen America as its home, and whose subjects comprise almost four-fifths of the whole population, we have an instance of what improper alimentation may accomplish, when assisted by habits of idleness and dissipation. But here, as in the former case, the great remedy is a proper use of aliments, air, food, and drink. How often do we find a patient who is reduced almost to a living skeleton, whose parchment skin, hollow eyes, fetid breath, and gloomy disposition, proclaim him a most loyal subject of King Dyspepsia; who has been treated and maltreated both by the profession and every quack in the country; who has swallowed nearly every drug known to pharmacy, without benefit—how often, I say, do we find that the only means which will restore such an individual to health, is a proper regulation of aliment. It may be that a teaspoonful of milk is as much as will be retained at once (in such an extreme case); but if only that much is retained we have room for hope; and by a judicious increase of the quantity, and a proper regulation of the necessary adjuncts, exercise and proper clothing, we may hope to restore such a patient to a normal condition of health. I have been fortunate enough to see one such extreme case, in the person of a young lady twenty-five years of age, whose normal weight was one hundred and forty pounds, and who was reduced to eighty pounds in less than a year's illness. In this case the stomach would reject nearly all the food taken, although given in quantities of one tablespoonful at a time. The cure of this case was effected by giving teaspoonful doses of new milk every half-hour, and gradually increasing the quantity as the stomach got able to bear it; in less than six months she was restored to her former weight and health, having taken but very few drugs.

It is a proper system of diet that has given to most irregular practitioners all the success they have ever obtained; without it their bubbles would soon burst, and they would be compelled to give up practice.

In view of all these facts I urge upon you the necessity of making a proper system of alimentation a study, in order that our usefulness be not in any way curtailed, and that we may have the consoling reflection that when any of our patients die, they were at least not starved to death for lack of aliment, which they were unable to ask for.—*Pacific Journal.*

Pamphlets.

On the Origin of Diabetes; with some new Experiments regarding the Glycogenic Function of the Liver. By W. T. Lusk M.D., Prof. of Physiology, L. I. Medical College. New York: D. Appleton & Co. 1870.

The author, after an analysis of the experiments of Bernard, Pavy, A. Flint, Jr., and a carefully devised and executed series of original experiments, concludes that the liver is the most active agent in sugar-production, but that the source of sugar is probably not confined to a single organ. Diabetes may arise from the failure of the liver to arrest the saccharine principles elsewhere generated, but passing through it, as Bouchardat has suggested. A valuable monograph.

Proceedings of the Second Anniversary of the Nebraska State Medical Society. June, 1870.

Two or three cases detailed to the Society may interest our readers, as suggestive of frontier professional duties.

Case 5. Reported by R. C. Moore.—William Thompson, an employee of the Union Pacific Railroad Company, was scalped by the Cheyennes, near Plum Creek Station, Nebraska, on the night of the 6th of August, 1867. He was placed under my care on the morning of the 8th, about thirty-six hours after the wounds were inflicted.

The scalp was entirely removed from a space measuring nine inches antero-posteriorly, and seven inches laterally, the denuded surface extending from one inch above the left eyebrow, backward nearly to the occipital protuberance, and laterally from one temporal region, over the vertex, to the opposite. The pericranium was in places detached, but the greater portion of that membrane was dried, and adherent to the bone. There was also a severe tomahawk wound of the right parietal bone, the fissure extending backward and downward, in the diploe, to the depth of an inch and a half, splintering the external table, but producing no injury to the internal. I also found a slight gunshot wound through the fleshy part of the right arm. The only dressing used during the whole course of treatment was surgeons' lint, saturated with pure olive oil, which excluded the air, and was easily removed for the purpose of cleaning the wound.

Healthy granulations soon appeared on the tissue surrounding the denuded calvarium, but showed no disposition to extend over the bone. In about three weeks the outer table began to exfoliate; at first at the margins, then under the adherent pericranium, the exfoliation extending more rapidly along the course of the nutrient vessels ramifying through that membrane.

As this suppurating and exfoliating process progressed, granulations sprung from the diploe, till the entire surface presented the appearance of a healthy wound. The last portions of the outer table to become detached, were the spots from which the pericranium had been removed.

The suppuration was very profuse, but the patient being strong and enjoying excellent health at the time the wounds were inflicted, did not at any time during the course of treatment present those symptoms of depression which would naturally be expected to follow so extensive an injury, nor were there any symptoms indicating that the inflammation had extended to the brain or its membranes. The only inconvenience or unfavorable complication was a severe neuralgic pain, extending down the right side of the head and face, but after the external table of the skull was cast off, the pain ceased, and there was no further disturbance of that character. The case progressed favorably, and in about three months from the time the scalp was removed, nearly the entire surface was cicatrized.

Case 7. Reported by J. H. Peabody.—G. O., Co. D., 2nd Neb. Cavalry, who was wounded by the Sioux Indians, the 22nd of June, 1863.

Mr. O. called at my office in August, 1866; his health was much impaired in consequence of the irritation caused by an arrow head which he believed was lodged in the upper portion of his right lung; when he coughed it caused great pain, and he swallowed with difficulty.

He was emaciated, and said "his life had become a burden from the constant pain and irritation kept up by the arrow head."

I found the arrow had entered to the outer side and lower margin of the right scapula, passing upwards and inwards through the apex of the lung or trachea, judging from the amount of hæmorrhage reported coming from the mouth at date of injury. Upon probing through a small fistulous opening above the superior extremity of the sternum, I found, what I afterwards ascertained to be the point of the arrow apparently firmly fixed about an inch and a half below the superior end of the sternum, lying flat against the trachea and æsophagus, with carotid artery, jugular vein and pneumogastric nerve overlaying it. With some little fear of cutting the carotid or innominata (having to tie the latter), or, perhaps worse, having my patient bleed to death in my office, I proceeded to enlarge the opening and introduced my forceps, gently lifting the arrow head from its resting place, the heel of it scraping over the arch of the aorta as it came out. Upon measurement it was found to be four and a quarter inches long, with a base three-fourths of an inch wide; rather an ugly missile to lie so long among the most delicate nerves, arteries and organs of a man's body. Mr. O. speedily regained his health, and lost his chance of a pension along with the arrow head.

Case 8. Reported by S. D. Mercer.—Result of a gun shot wound fracturing the crest of the right ilium and forming an artificial anus by ulceration of colon.

Joseph B., aged 24, strong and healthy, always lived a frontier life, and was free from that predisposition to tubercle so common among his fellow "half breeds." May 31st, 1868, he received a gunshot wound from an antagonist about ten paces in front, and a little to his right; ball entered about one inch behind the anterior superior spinous process of the right illium, fracturing crest, and probably lodged about the lower part of ascending colon. Patient reached Omaha July 3d, almost exhausted from a journey of eight hundred miles, by cars and stage, and the constant drain upon the system.

Prior to his arrival he had no treatment save the charms common among his tribe, but his father, an intelligent old Frenchman, was with him all the time, from whom the following facts were elicited. After the accident there was no movement of the bowels for ten days, when a small,

hard, fæcal mass passed, containing a spicula of bone. About the same time the external wound, which had previously closed, broke, and a large quantity of pus and fæcal matter passed through this new opening. After this, the bowels only moved occasionally, but the discharge from the wound was constant. On first examination the fractured parts of the bone were found loose, and near the external opening, but it was not deemed prudent to remove them until July 14th, when, by the assistance of Drs. McClelland and Baumer, chloroform was administered, the opening enlarged, and the loose bone removed; this gave room to a large and free exit of fæcal matter and a more thorough examination of the part; injections of water per rectum were partly returned, and partly passed out through the artificial anus.

By the use of a speculum and a strong sunlight, the mucous membrane of the colon could be seen, and at one time the ileo-cæcal valves were brought plainly to sight. The wound gradually healed by granulation, the discharge grew smaller, and the general health of the patient rapidly improved; the only unfavorable symptom was retention of urine, but this was overcome by use of the catheter. Patient left Omaha for the new reservation, near Fort Randall, Aug 14th, just one month after the operation.

I am informed that he is still improving, but there is a slight discharge from the artificial anus; the right leg, rendered nearly useless by fracture of the bone to which the muscles are attached, has partially regained strength and power of motion.

Transactions of the Indiana State Medical Society. 1870.

The present volume of Transactions contains several papers of intrinsic excellence. Geo. Sutton, M.D., of Aurora, Ind., the President, contributed an able and eloquent address on "Man's Power over Nature, and Medicines as means by which he aids and controls the Laws of Life."

Prof. Geo. W. Mears read a paper on the Treatment of Puerperal Hæmorrhage, which gave rise to considerable discussion. Dr. Mears: in *post partum* flooding, friction of the abdomen, grasping the fundus, and such pressure as will secure a response from within. If these do not succeed, ice water, or the cold douche to the abdomen. Or ice water intra-uterine injections, or introduction of a lump of ice, with or without a muslin cover. Or a lump of alum rubbed over the surface from which the placenta has been detached. Other astringent and styptic injections may be used, but he prefers the Persulphate of Iron, in the proportion of one ounce to eight ounces of distilled water, having first removed clots, debris, etc. Prof. Mears considers ergot indicated in these cases, but too slow in its action when given by the stomach, and suggests its use hypodermically, as recommended by Dr. Lente (he of calomel-in-sedative-doses fame.) Pressure over the descending aorta is advised in perilous cases.

Dr. G. V. Woollen, in the discussion which followed, detailed a case in which he gave Ergotine in aqueous solution, five grains in ten drops of water, by hypodermic injection inside of the thigh, with the result of very free contraction in seven minutes. He thinks it would act more promptly if more freely diluted.

Dr. Hibberd, of Richmond, has little faith in the Ergot—much in Opium.

Dr. Harvey, of Plainfield, confided, in an urgent case, in a grain of Opium, three grains of Sugar of Lead, and half a grain of Sulphate of Zinc. Considers stimulants essential—whisky in large quantities, together with aromatic Spirits of Ammonia. Thinks Ergot dangerous used hypodermically, from its forming a clot.

Dr. Rooker, of Castleton, advocated kneading the uterine region until the ball is felt, and then applying a tight bandage.

Dr. Wishard strongly encouraged the use of Opium.

Dr. Pennington, of Milton, believes that Quinine produces contraction of the uterine fibres, and expedites labor. He commences by giving from three to five or seven grains every three hours, and has "never missed getting up good contracting powers of the uterus." It is ahead of any other remedy he has ever used. In a threatening case gave whisky and five grains of quinine three times within two or three hours, with excellent results.

In the hæmorrhage of threatened abortion, Dr. Wishard uses the tampon, and Dr. Mears uses a sponge saturated with Tincture of Iron, as a direct application to the bleeding part.

E. Mendenhall, M.D., of Zionsville, follows with an essay on "The Utility of Ergot in Facilitating Labor," wherein he details the evidences, and urges the use of this very-often-doubted agent.

F. J. Van Vorhis, M.D., of Stockwell, in an essay: "Psychical Influence upon the Organization of Structures," enforces the importance of attention to mental influences in symptomatology, etiology and therapeutics. It is a philosophical glance at a subject which has been left too long to charlatans and sciolists.

H. V. Passage, M.D., of Peru, gives a history of a case of Reduction of Dislocated Hip, by Chloroform and manipulation, and R. E. Haughton, M.D., of Richmond, furnishes an essay on the Principles of the Flexion Method in the same difficulty. These papers we shall notice more in detail hereafter.

An elaborate and excellent monograph on the Pathology and Treatment of Syphilis, is given by the Secretary, G. Woollen, M.D., of Indianapolis, which deserves wider circulation than the volume of "Transactions" will secure. We would reproduce it *in extenso* did space permit. Dr. Woollen is a clear, concise and sensible writer, whose duty it evidently is to let his light shine through the medical journals.

Wilson Hobbs, M.D., of Carthage, chronicles, with illustrative plates, an interesting case of disease of the skull, requiring four operations for its successful removal—adding at least four years to the life of the patient. A remarkably large proportion of the calvarium was removed for what was apparently syphilitic degeneration of the bone.

A paper by C. E. Wright, M.D., of Indianapolis, on Purulent Aural Catarrh, a "Report on Board of Public Charities," and the inevitable report on "Medical Rank in the U. S. Navy," complete the list of published communications.

There seems to have been a very harmonious and profitable session, with a gratifying absence of discussion on points of order, the code, etc.

We congratulate our Indiana brethren on their achievement of a scientific organization and not a mere trades-union.

Reduction of Dislocations of the Hip. Principles of the Flexion Method. By R. E. Haughton, M.D.

This is a paper published in the transactions of the Indiana State Medical Society, and is, in its scope, mainly a review of Prof. Bigelow's work on the Hip.

Dr. Haughton shows that the manipulation method of reduction was clearly recognized by Hippocrates; that it was advocated during the last century; and that flexion and rotation were intelligently combined by Despus, in 1835.

In regard to the influence of the ligamentous tissue on displacement in dislocations of the hip, and its affording an obstacle to efforts at reduction, Dr. Haughton says: "Prof. Bigelow has been anticipated." So far as the particular tissue of the iliofemoral ligament is concerned, Dr. H. quotes from Dr. Fenner's report of an autopsy in a case where hip dislocation existed, made

in 1848, when that structure was "found tensely stretched," although Dr. Fenner failed to recognize the resistance which it exerted in efforts at reduction.

But Prof. Gunn's experiments and dissections, are quoted effectively to show that he had anticipated Prof. Bigelow in the influence exerted by the untorn portion of the ligament, as well as the fact that a portion of the ligament remained untorn. He quotes, also, from Prof. Moon, who repeated Prof. Gunn's experiments.

He also quotes Prof. Bigelow against himself when he admits that the "ilio-femoral ligament will *not* be found stripped clear of the remaining portion of the capsule." He further says: "the resistance is found in the ligamentous structures, mainly the capsular, which, for all purposes, includes the ilio-femoral."

But Dr. Haughton also recognizes a muscular force which he thinks aids the surgeon in his efforts to reduce by manipulation. This idea is expressed in the sixth and seventh conclusions to which he arrives, which are as follows:

"6th. That both the internal and external rotators of the hip joint are so arranged by origin and insertion, when properly directed in the flexion method, to bring the head of the bone back to this axis of motion, which passes through the acetabulum."

"7th. That the planes of the muscles, and through which they must act, are planes in all instances either parallel to the axis of motion of the hip and body, or at right angles to it."

Transactions of the State Medical Society of Pennsylvania. Twenty-first Annual Session. 1870. Sixth Series, Part I, Pp. 216.

From the address of welcome by Dr. J. A. Meigs, of Philadelphia, we cannot forbear to extract the following judicious remarks:

"It must never be forgotten that medical organizations in this country, and especially in this State, have no legal, but simply a moral power. The due appreciation of this fact is more than ever necessary now, since it is evident that in the medical profession the strongest obstacle to its thorough and efficient organization is the tendency to individualization which is manifestly growing stronger every day. This tendency, so clearly attributable to the large increase in individual liberty resulting from the

career of development through which civilization has for centuries been slowly advancing, is heightened by the too exclusive cultivation of specialties in medical science, and by the low standard in medical education, and the consequent introduction into the ranks of medicine of incompetent persons, who, conscious of their lack of skill, and pressed by the intense competition for business, resort to practices to insure pecuniary success which are completely subversive of all dignity in medicine as a liberal profession.

"It being apparently impossible to overcome the difficulties just indicated by mere legislative action on your part, it may well be asked whether much of the time spent in the discussion of the ethical relations of the profession would not be far better devoted to other, and, perhaps, after all, the greatest objects of your Society—objects which, in the second article of your constitution, are defined to be "the extension of the bounds of medical science and the promotion of all measures adapted to the relief of suffering, the improvement of the health, and the protection of the lives of the community." Under present circumstances, the elevation of professional character and the protection of your individual interests can only be accomplished by the practical recognition of the scientific requirements of medicine. So long as medicine continues to be purely empirical, so long will quackery continue to flourish. Not by exposing its criminal falsifications can you make quackery impossible, but rather by casting the strong light of science upon the doubtful and obscure places in medicine. Only under the influence of this light can the mercenary impostors who cajole the public, and make the practice of physic a mockery and a by word, be driven away as the mists of night before the coming dawn. In the cultivation of medical science lies your true and only strength. By cultivating science, you give to medicine exactitude; by giving to the healing art exactness, you place it upon an elevated platform; you isolate at once this goodly tree from the horde of pretenders who so long have carried on their nefarious schemes under the benign influence of its widely-spreading branches. You all know how surgery, resting upon the exact science of anatomy, and calling to its aid various accurate mechanical appliances, is now but little troubled with impostors. The "natural bone-setters" and other similar charlatans have long since disappeared from its domain. You also know how practical medicine, on the other hand, based as it is upon an experience which is so often fallacious, upon a physiology and pathology still very imperfect, and an organic chemistry in a state of great confusion, is still a prey to the rapacious cunning of every quack who boasts his infallible remedy for phthisis, rheumatism, and all those special ills which, in consequence of our ignorance of their essential nature, continue to resist all therapeutic effort. The problems of medical science awaiting solution are numerous.

The difficulty of their solution is equaled only by its importance. No more important object, indeed, can occupy your thoughts and time than the systematic attempt to clear up some at least of these questions; many of them can be investigated by the clinical methods peculiar to medicine; for the unraveling of others, aid must be sought in the methods and appliances of physical, chemical and natural science. There is ample room for the gratification of every taste, of every mental tendency. Look around you and behold with what extraordinary rapidity science is unfolding itself in a multiplicity of directions. To practical medicine the momentum of this active development has been imparted with happy results. By means of various ingenious scientific instruments, such as stethoscopes, laryngoscopes, ophthalmoscopes, otoscopes, endoscopes, microscopes, thermometers, manometers, the sphygmograph of Marey, the stetho-sphygmograph of Hawkins, different electrical machines, etc., the laws of sound, light, heat, electricity and mechanics have been practically employed, in not a few instances, with signal success, in elucidating the phenomena of disease. In consequence of this rapid advance in science, and the multiplication of scientific instruments, medicine is at present undergoing a remarkable change. While its data are daily becoming more and more exact, the theories or fundamental principles which constitute its framework, so to speak, are undergoing, like our social fabric, a complete revolution. To the reflecting mind it is evident that medicine is now passing through a chaotic phase in its onward career. The day of blind obedience to authority is at an end. No asserted fact, no theory however plausible, finds its way to acceptance on account of the great name attached to it, but, on the contrary, is immediately tried in the crucibles of experiment, observation and induction, by that earnest and enthusiastic band of laborers, who, whether in physics or biology, are seeking with busy hands to reconstruct the philosophy of medicine and place it upon a sure, scientific basis."

In another department of the present number will be found several practical scissorings from this interesting volume.

Transactions of the Medical Society of New Jersey, 1870. Pp. 214.

From this pamphlet we find room only for the following extracts. Dr. B. Rush Bateman, of Cumberland Co., reports:

"In one family we were present at five successive births, where each child was a hermaphrodite, partly composed of both sexes, especially the genital organs. In every case there was a penis and vagina, in two of which there was a sack on each side of the vagina externally, with a testicle in each. It was exceedingly

difficult to classify the sex in such cases. In one case in particular, were both sexes so well defined, that it was finally concluded to class it with the males; it was called Charles. As it grew older it was thought it would, by its instincts, develop its sex, by wanting a knife, a doll or needle, and so it did; for when a proper age arrived to choose its articles of amusement, it wanted a doll, needle and thread; its name was then changed to Charlotte. She is still living and healthy, thirty or more years old. Her features are coarse, voice more masculine than otherwise; but is smart and active, said to be remarkable for her sagacity at housewifery; does not mix with either sex to any extent.

"All of the five were healthy children, and lived to grow to maturity; in fact, all are now living but two. One was married, but he never had any issue."

Dr. Charles F. J. Lehlbach gives clinical observations on Scarlatina, with remarks. This is illustrative:

"Case IV.—Passing a neighborhood where I had been attending several cases of Scarlet Fever, I was called in to see a girl, aged 12 years, who had, so I was told, "caught a cold." Found her with some soreness of throat, fever, and a slight scarlet rash. Her little brother was then convalescent from a very mild attack of the disease. Pronounced the case Scarlet Fever. Prescribed, and ordered the child to remain in the house. Heard no more of the patient until, in the afternoon of May 27th, 1869—two weeks after I first saw her—I was called in great haste, as the child had spasms, and "would probably be dead before I could get there." Found her in a really alarming condition. Violent spasmodic contractions of upper and lower extremities, alternating with rigidity of the muscles, partial opisthotonos, foaming at the mouth, teeth tightly set, eyes vacantly staring, entirely unconscious, pupils somewhat dilated, reacting very feebly, breathing rapid and laborious, skin preternaturally hot.

"By a few rapid questions I learned that my injunctions to stay at home had only been followed for a few days. She had then resumed her attendance at school, although not feeling entirely well, until some days previously, when on returning from school, nearly a mile distant, she had been caught in a heavy storm and been thoroughly drenched. With the exception of a little fullness about the face, no anasarca. Urine had been scanty.

"*Diagnosis.*—Toxæmia, imperfect elimination of Scarlet Fever poison, probability of renal trouble, congestion and transient œdema of the brain, with serous apoplexy imminent.

"*Indications.*—Revulsives, nervous sedatives, reëstablish the function of the kidneys. Sent for mustard, ice, chloroform, and bromide of potassium.

"*Treatment.*—Mustard to feet and legs; crushed ice, wrapped in a towel, under the spine, ice to the head; rub chest and abdomen with ice; by mouth 30 drops of chloroform with a scruple of bromide of potassium, followed in half an hour by one drachm of chloroform, and one drachm of the bromide, suspended in milk, per anum. Then suspended the ice applications, wrapping the patient in woolen blankets. In the course of an hour and a half the spasms recurred at longer intervals, with less intensity; muscles relaxed; in two hours she was able to swallow well, and showed signs of returning consciousness. An hour later, perfectly conscious, with no sign of cerebral disturbance except total blindness, of which she complained. Left her, with directions to renew sinapisms and to take ten grains of bromide of potassium every three hours until natural sleep ensued, and to be called if there was a change for the worse. The next day I found her perfectly rational—exhausted—no fever—pulse a little frequent—blindness had continued nearly ten hours when sight reappeared—urine slightly albuminous. Ordered lime water and digitalis, quinia, and tr. ferri. Four days later, urine free, no trace of albumen. Continue tonics. Patient discharged."

Dr. T. F. Morris illustrates Puerperal Eclampsia by cases of which this is one:

"Mrs. P.—April 28, 1869, called to see Mrs. P., pregnant for the second time, expecting her confinement, at the latest, during the early part of May. Rather full habit; was complaining of cephalalgia, obscurity of vision, and general lassitude; extremities slightly œdematous; face somewhat puffy. She had taken a saline cathartic before sending for me; ordered it repeated. Requested her to keep for me the morning following, her urine, for examination. During the night she was seized with a convulsion, and being in attendance upon another case, my friend, Dr. Reeve, saw her. Had her cupped on temples and back of neck, which was being done when I arrived. Upon digital examination the os was found to be dilating and uterine effort quite regular. These spasms continued during the whole night and through the following morning, with no return of consciousness. Chloroform was used cautiously and carefully, to suspend these terrible convulsions, and did seem to moderate their violence very much. Elaterium was given, which produced free catharsis. Bromid. potass. was given by injection, ʒj. doses, every hour. Diaphoresis produced by wrapping hot bricks with wet cloths, and placing them about her person. Her labor terminated about 2 P. M., of the 29th. All convulsive movements ceased. She remained comatose during the following night, and with the morning hours reason again returned. She was still kept upon the bromide, ʒss. every three hours, until the following day, when

considerable dyspnœa manifesting itself, her lungs were examined, and pneumonia was found, to complicate her troubles. She was then put upon 10 grs. Iodide potass. every 2 hours for the next 48; her chest enveloped in an oiled silk jacket, and at the end of this time the dose of the Iodide was lessened to 10 grs. every 3 hours: and finally, after two days more had elapsed, Iodide was reduced to 5 grs. every 4 hours. She was freely stimulated, fed with ess. Bf., and after a hard struggle for life, convalesced. I omitted to state that her urine was largely albuminous, and continued to manifest this condition until convalesence was positively established."

Editorial.

A Whisper in Ascalon.

The Albany dailies are jubilant over the admission to a chair in their Medical College, of an avowed Homœopathist, who is not only a Professor, but the President of the Faculty. The *Evening Journal* of that city discourseth thus:

"It is, indeed, gratifying, to know that the barriers which have hitherto divided the two schools of medicine are being removed, and to see our college taking the initiatory step towards such a desirable achievement. We believe this is the only allopathic medical institution in this country that possesses views sufficiently liberal to allow any of the chairs to be filled by men who firmly and practically believe in the homœopathic doctrine. It is also pleasant to know that several of the trustees of the college are firm believers in homœopathy.

The *Sunday Morning Press* is less hopeful as to this sign of the times, and lucubrates:

"We remember some of the professors of this institution making vigorous war against homœopathy, and now we find these same men associated in the institution with a professor who is a homœopath. This astonishing inconsistency is reasonably explainable only on the theory that the Faculty believed when they secured the appointment of Prof. Harris, that it would encourage the patronage of the homœopaths.

"Our medical brethren seem to us to have a chronic disposition to do things in a way a little different from anybody else. Thus, while the clergy and the lawyers have no peculiar laws to govern their respective professions, but yet effectually call their members to account when they overstep the bounds of propriety, the medical profession, on the other hand, establish a long series of laws (their medical ethics) to guide the conduct of its members, apparently having little confidence in their good sense and discretion, and these laws they by no means observe. Thus, the medical profession,

unlike the other professions, has a vital law which plainly forbids advertising, and all doctors are supposed scrupulously to abstain from having their names appear in the public prints. But, in fact, the names of medical men are very frequently seen in the newspapers, as every one in this city will testify. Consistency is said to be a jewel, and we believe it to be so, as well in the medical profession as out of it. If the college is allopathic or if it is homœopathic, let it stick throughout to the principles which it professes."

We have seen no denial of this appointment as yet, by the members of the Albany Faculty, or any explanation of the circumstances which, unexplained, of course, put them beyond the pale of legitimate medical association. Now let them open their doors to women, give free tickets to one student from each congressional district, appoint a professor of Free Love and Spiritualism, and the eloquent faculty will no longer be obliged to face a beggarly account of empty benches—however void the heads of the occupants.

Fire-Proof Buildings.

Edwin May, Esq., of Indianapolis, is evidently on the borders of a "glorious summer," as he is engaged in the philanthropic work of developing an improved and cheap mode of rendering buildings fire-proof or non-combustible. The plan consists essentially in the use of iron lath, and also the use of sheet iron, with mortar on top, for a floor lining, which process also deadens sound, and bids defiance to rats. His method should be generally known, and thus one terrible outlet of human life be blockaded.

New Journal.

The Medical Times; a Semi-Monthly Journal of Medical and Surgical Science. Published on the 1st and 15th of each month, by J. Lippincott & Co., Philadelphia.

The initial No. bears date Oct. 1st, and promises fairly for the future, at $4 a year. The Prospectus announces a hundred or more regular contributors among the "first families" of the profession. We sincerely trust that the *promising* gentlemen will really contribute. But our own experience is that the promise is, in the majority of cases, the *vox et preterea nihil.* We suggest that the Messrs. Lippincott & Co. put down the names as "Associate Editors," and thus secure at least an article from each.

The matter is copy-righted, or we might be tempted to give our readers a few specimens of its contents. We are comforted by the reflection that a specimen copy may be obtained by enclosing 20 cents of postal currency to the enterprising publishers as above indicated.

It is to be noted that the *Reporter* still continues its issue.

Indian Medicine.

From a paper read before the *Orleans County* (Vt.) *Society of Natural Sciences*, by the Rev. T. E. Ranney, who was a missionary three years among the Pawnees, and among the Cherokees fourteen years, we extract the following:

"As to their knowledge of medicine they really have as little as of religion. We are invited to visit a lodge, where one is sick with a fever; we are white men and it is supposed, of course, by them that we can give medicine to cure the sick. But our inquiries are now to ascertain what they would do. We have seen many a handbill recommending various medicines, because it is said it was in use by the Indians, who are supposed by many to understand all medicine and to be able to heal all the sicknesses of the people. Nothing could be a greater evidence of quackery. I do not profess to know that all the tribes of Indians were as ignorant of these things as were the Pawnees, and yet I know nothing that would indicate that any knew more. If the knowledge which the Pawnees had acquired from the whites was taken away, there would be none left. Their medicine, like their religion, is but a bundle of superstition, consisting of charms and jugglery. They are easily imposed upon and made to believe in almost anything hidden and mysterious. They can be made to believe that a peculiar medicine is beneficial, as many in civilized life can; they do not, so far as I could learn, administer any medicine to affect the system. It is doubtful whether they know of anything that would act as a cathartic. For an emetic they seemed to know that tepid or warm water would promote vomiting, but it is doubtful whether they had not learned this from the whites. Some of them could at times produce vomiting by the use of a feather run down the throat. It was not known that the Pawnees ever drew blood intentionally as a remedy. Some of the neighboring tribes did, but it is probable they learned to do so from the whites. Indeed the Pawnees had learned that the whites sometimes did, and supposed it to be a panacea, and if they were ever ill when white men were about who would bleed, they were wont to resort to them with the request to be bled. I frequently saw the manner of cutting themselves practiced by two other tribes, the Omahas and Otoes, to produce blood. They

usually bleed somewhere about the head, and to do it shave the hair from the part, often on the temples, sometimes on the top of the head, and then take a large knife and hack the skin up in a horrid manner over a spot perhaps as large as a dollar, and then place over the wound so made the larger end of a cow's horn, and with the mouth and lungs exhaust the air at the other end so as to cause the blood to run, till they have accomplished their object and removed the seat of disease. It was thus these tribes practiced in removing fevers. But not so with the Pawnees. Their doctors would take a different course; they would puff and blow all over the patient with the mouth, in order to cool off the fever, and instead of dieting according to the rules of our physicians they would set before the patient all the tempting viands in their reach. Their philosophy is that while he can eat he will live, and if he does not eat his allowance he will die. Hence it seemed to be almost useless to give medicine to a Pawnee sick with a fever. If the fever is once broken, and the patient begins to recover, his appetite comes like an armed man, and it is useless to tell him he must not gratify that appetite. His maxim is, eat or die, and the *fact* generally is, in such a case, eat *and die.* Their eating is not such as is required to sustain a weakened frame, but such as a sickly appetite demands. Perhaps their practice in cases of fever is most erroneous, but we saw more of this because "chills and fevers" were first introduced among them when we were there. But they did not seem to understand the nature of any disease. They can perform no surgical operation with safety. In cases of accident they cannot take up an artery. Their diseases in their simple life are all of a simple kind, and they seem to have no complex diseases among them. Their practice at an *accouchment* is simply the rattling of a gourd, a child's rattle. I have lately seen a medicine advertised to cure the toothache, which was said to have come from these same Pawnees. A more contemptible imposition could not well be practiced, as they were never subject to any disease of the teeth. An anodyne for the toothache or a vermifuge obtained from them would be alike worthless, they having no use for either."

Case Book.

E. P. Stevens & Co., of this city, send us "Shaw's Register and Photographic Case Book," which fills a want we have long experienced. By its use a history of each case treated can be preserved in systematic order, and can be written up for publication or other use with great facility. The best memory will be insufficient to recall in every instance the details of diagnosis and treatment in cases presented perhaps months previously, and a

brief reference, which this book provides for, will freshen the whole at once. A portion of the book is prepared for use in preserving photographs of surgical affections, etc. It is of convenient size, and scarcely more expensive than the same amount of paper and binding for an ordinary account book. We notice the book not for the advantage of the publisher, of whom we know nothing, but in the hope that some of our readers will take the hint, make records of their cases, and then publish those worthy in the *Journal.*

Unhappy Diagnoses.

It is said that a somewhat noted specialist of this city, who has a trick of disparagement for all non-specialists, recently diagnosed a sero-cystic tumor of the breast as cancer, and attempted its removal as such. In another case, he made an exploratory abdominal incision, *plunged a trochar into a tumor which yielded blood only*, and then by the large incision attempted to remove the tumor which was agglutinated in every part by cancerous deposit to the large and small intestines, etc., etc. *He* recovered.

Yet this man ventures to insult the family physicians of parties who apply to him for examination. It is hoped a glimpse of the rods in pickle for him, will teach him better manners, or, at least, discretion. *Verb. sap.*

The Western Monthly, for November, 1870.

CONTENTS: William Cullen Bryant, by James Grant Wilson; Did He Dream It? by Josephine Clifford; the Indian Territory, by Milton W. Reynolds; Public Opinion in Politics, by D. H. Wheeler; Sentenced and Shot, by R. S. Sheppard; Indian Summer, by B. Hathaway; New Constitution of Illinois; Caving In, by H. R. Haines; A Ride through Kauai, by J. T. Meagher; A Western Journalist, by L. D. Ingersoll; Mirage, by Edgar Fawcett; Of Books—their Makers and Readers; by Henry Boss; Who was Souvreigne? by L. A. Roberts; Reviews of Books; Chit Chat. The Lakeside Publishing Company, Publishers, Chicago, Ill.

We are happy to chronicle the reappearance of this valuable and popular Magazine. Its October forms were destroyed in the great fire of September last, but it has arisen from the ashes improved and strengthened. It is now among the best of the literary monthlies, and well worthy of the patronage of Western readers.

The Prescription Record.

S. W. Butler, M.D., editor of the *Reporter*, at Philadelphia, sends us a little volume adapted for brief record of the date, symptoms in each case prescribed for—a prescription blank, and blank for its duplicate on each leaf. There are about 400 leaves. It is a very convenient arrangement for rapid record of cases, and it should be on the table of every physician's office, and is not too large to be carried in the pocket. The prescription blanks are punched around so that each when written on it can be easily torn out. Price $1.00. Address, as above, 117 S. Seventh street, Philadelphia.

Rush Medical College.

The opening exercises of this institution took place Wednesday evening, the 28th of September. The introductory lecture to the course was given by D. A. Morse, M.D., Lecturer on Legal Medicine and Insanity. The annual course of lectures is now in successful progress before a large and intelligent class.

Who ?

A correspondent wishes to know who punched a sound through the walls of a Fond du Lac man's bladder, recently, whilst searching for calculus. All we know about it is, that "somebody blundered," and the man died.

[The following was received too late for insertion in the usual place. Ed.]

Cook Co. Hospital. Reported by C. T. Fenn, M.D.

Clinics are conducted in the Cook County Hospital with wonted regularity and interest. The following are notes of exercises in the service of Professors Ross, Powell, Johnson, and others of the attending staff:

Oct. 2. *Medical.* Ross. Case I. Albuminuria.—The presence of albumen in the urine tells us that we have a disease of the kidneys: congestion, or inflammation, or degeneration. There is failure of secretion of water and of elimination of urea. Hence

we have dropsy and poisoning of the blood. *Treatment*—1. Subdue inflammation. 2. Overcome dropsy. 3. Eliminate urea. Apply fomentations to the back, sometimes cupping, if the inflammation be acute. Keep the patient quiet and warmly covered in bed; give him bland diet. Excite free diaphoretic action; the best method is by the hot air bath; a gallon of water may thus be obtained at once. You may eliminate water by the bowels. I would not use elaterium. One of the best means is bitartrate of potash, combined with a little jalap. This seems also to have a mild effect on the kidneys as a diuretic. Such use of medicine is opposed by the testimony of many high names, still, we favor it. This also affords elimination of urea.

Case II. A blacksmith, two weeks ago, taken down with a chill and pain in the joints. On admission he had the appearance of typhoid fever, but there was no diarrhœa or tympanitis. He had high fever and a dry tongue. A large amount of effusion existed in the left wrist, and crepitus. The right knee has now a large amount of effusion. The diagnosis is obscured. It will not do to treat it as rheumatism or gout; but, in rheumatic gout, we may have a state of things analogous to this. *Treatment*—Quinine, in two grain doses, three or four times daily, with wine and Opium at night.

Case III. Fever. Admitted Oct. 10. For several days previously he had complained of headache, loss of appetite, and chills. He then took his bed. On admission, the symptoms were those of typhoid, viz.: febrile disturbance, diarrhœa, tympanitis, and gurgling in right iliac fossa. Stools the color of pea-soup—characteristic. [Stools exhibited.] *Treatment* — Hydrochoric acid, twenty drops, every two hours; and, to control diarrhœa, turpentine emulsion. Sponge the body with cool water daily. Give beef-tea and milk—a pint of beef-tea and two pints of milk daily.

Case IV. Fever. Like the above.

Surgical. Powell. Case I. Results in fracture of the thigh. 1. Stiffness of the knee. Every limb is useless for a long time after the union of bone. 2. Shortening. If you get an inch of shortening you have a good result. As a rule in the hospital, we get from one-fourth to one-half an inch shortening. Measure

from the anterior superior spinous process of the ilium. We may be so fortunate as to get none. 3. Length of time dressings should remain. Keep them on ten weeks, as a rule. Dressings must be as simple as possible. A weight and pulley for fractures of the femur, and a couple of bags of bran to keep the leg steady. There is one objection only to the weight and pulley; it may be the knee is left a little stiffer by their use. As a rule, don't think your patient will be able to walk, or work with ease, under six months. 4. Callus. As a rule, if you find that a large amount of bone has formed around the end of a fragment, you may know the bones have not been kept still.

Case II. Colles's fracture. The most frequent form of fracture. A woman, washing windows, fell from the second story to the ground. To detect deformity, run the eye over the case. Charges of malpractice are most frequent in this form of injury. It is safe to say that the movements of the wrist will always be impaired. There will be a peculiar deformity. The diagnosis cannot be mistaken. Remember that you can hardly ever have a fracture of the lower end of the ulna. *Treatment*—Don't put a bandage next the skin. Never use a soft splint, as pasteboard. No evaporating lotions. You should have some pieces of board. Fit two to the well arm. They should not extend to the fingers. They should be a little wider than the arm. Pad them with sheet batting. In country practice, an old sheet is best, six or eight thicknesses. You may correct deformity by a compress. Then take hold, and make extension and counter-extension. Take off splint in six weeks, not sooner. A pistol splint does no good. But, with a bad result, the old authorities might be cited to prove that you had not done all. See your case every three or four days. Look at the arm after the second day, to see that the bones are coapted. Afterward, avoid too frequent handling, for fear of delayed union.

Case III. Woman. Result of a fracture of this kind, five weeks standing. It ought to be united. Sometimes you hear of dislocation of the radius outward; there is no such thing; but the appearance is due to a little shortening. Here there is no provisional callus, because the bones have been kept still. She will complain of tenderness and stiff fingers. This case seems perfectly

united. You may remove the splint and rub the joints with some stimulating liniment. I advise you to make your own splints. With adhesive plaster, an old splint or a board, you may treat any conceivable fracture. A patent splint will not fit many different cases. Keep patent splints in your front office, if you please; they are for ornament merely.

CASE IV. Woman, with hand bitten by a man. The bite on her finger was followed by erysipelas, very painful, and resulting in an ulcer which may go down to the tendons, on the back of the hand. Object to be attained: relief of pain. Give Opium and Quinine. The effect of Opium, as an anodyne, is different when rubbed up with Quinine. I do not, ordinarily, believe in poultices; but the best thing here would be a poultice, to hasten a separation of the slough.

CASE V. Man, slightly wounded on the joint of a finger six weeks ago. The whole hand and arm has been immensely swollen. Erysipelas may attack every tissue and destroy it here, it has caused entire destruction of the metacarpal bone of the thumb. Do not treat it as though it were an ordinary inflammation. (Ladies retire.)

CASE VI. Shown to illustrate the ill effects of a long prepuce. Nature never intended that the prepuce should lie over the glans. A long prepuce is a nuisance, morally and surgically. The Jews never have cancer of the penis. Do not confound this balanitic inflammation from acrid discharges from impure women, with chancre or chancroid. Be careful that urine is not retained. If it is so, slit. Use carbolized water; no mercury, no medicine of any kind, but we may use evaporating lotions. Be especially careful in the diagnosis of all venereal diseases before commencing the use of mercury. But when disease makes its appearance from three to six months after an exposure, you may begin to use the protiodide in one-half grain doses three times daily. Continue it till all symptoms disappear. But the patient is not then well. He may have a second attack: treat in the same way. If a third attack, use Iodide or Bromide of Potassium. If you begin in every suspected case, you may induce the symptoms by mercury in their worst form, viz., sore mouth, falling of the hair—in a word, all that is most dreaded in syphilis.

Case VII. Result, in cure of hydrocele of the cord, by injection. No change from normal condition to be seen. Do not cut these cases.

Case VIII. Child. Hip joint disease. Wearing Sayer's splint. Object: to take weight of body off the joint.

Loot.

Wm. H. Bradley, M.D., in the Pennsylvania Transactions, 1870, recommends in *Scarlatina* for the general and aphthous condition:

℞ Sodæ Sulphitis, - - - - - - - - - ʒ ss;
Sp. Ether. Nitr., - - - - - - - - - ʒ ij;
Syr. Gaultheriæ, - - - - - - - - - ʒ vj;
Aq., - - - - - - - - - - ʒ ss;
M. S. A dram every three hours.

Conjoined with this, as an expectorant and anti-spasmodic:

℞ Syr. Prun. Virgin., - - - - - - - - ʒi ;j
Syr. Scillæ, - - - - - - - - - ʒ j;
Ext. Belladon. Fl., - - - - - - - - gtt. xxiv;
Ext. Verat. Virid. Fl., - - - - - - gtt. xxxvj;
Tr. Lobeliæ, - - - - - - - - - ʒ ij;
M. S. A teaspoonful every three or four hours.

When the aphthous condition abated, in about a week, he prescribed as an alterative and tonic:

℞ Tinct. Ferri. Chlor., - - - - - - - ʒj;
Potassæ Chlorat., - - - - - - - - ʒ ij;
Syr. Gaultheriæ, - - - - - - - - - ʒ iij;
M. S. A dram three times a day.

The same gentleman observes (*op. citat.*, p. 99):

"The treatment I have adopted the past two years in fevers of the remittent, typhus, malarial, and typhoid types, has been with the sulphite of soda and quinine. At the outset, I usually give an alterative and cathartic dose, composed of—

℞. Mass. Hydrarg., - - - - - - - - gr. x;
Ipecac. Pulv., - - - - - - - - - gr. ss;
Quiniæ Sulph., - - - - - - - - gr. ij;
M. Ft. mass in pil. iij.
To an adult at night, followed in the morning, or in six or eight hours, by a gentle aperient.

"I then prescribe the sulphite as follows:

℞. Sodæ Sulphitis, - - - - - - - - ℥ ij;
Ipecac. Pulv., - - - - - - - - - gr. vj;
Quiniæ Sulph., - - - - - - - - gr. xij;
M. Divide into twelve powders; one powder every three hours.

"Conjointly with this, as a refrigerant diaphoretic, either of the following:

℞. Liq Ammoniæ Acetatis, - - - - - f ℥ vj;
Spts. Æther. Nit., - - - - - - - f ℥ ss;
M. f ℥ ss. every three hours.

Or—

℞. Acid. Citric., - ℥ iij; Aquæ, - - f ℥ iv;

℞. Potas. Carb., - ℥ ij, ℈ij; Spts. Æther. Nit., f ℥ ss; Aquæ, - - f ℥ iijss;

M. One tablespoonful every three hours in a state of effervescence alternately with the powders.

"In remittents, giving the powders during the remission every hour or two, and either of the above solutions, during the paroxysm of fever, I generally succeed in breaking up the paroxysm in a week or ten days. Since adopting the above treatment, I have not had a case of enteric fever continue over four weeks, and have in nearly every instance witnessed the controling influence of the remedy over the disease. In cases of great cerebral exaltation, I usually increase the amount of ipecac. in the powders, sufficient to produce slight nausea, and in great depression of the nervous centres, the amount of quinine, and if conjoined with symptoms of great debility, as is often the case, add strongly concentrated animal food, milk, beef essence, etc. In cases of great wakefulness, with delirium attendant upon adynamic conditions, as evinced in the widely dilated pupils and other correlative symptoms, I always give opiates either by the mouth, or hypodermically, either with the syringe or upon blistered surfaces. In cases of great tenderness in the iliac region, with great tympanitis, I prescribe sinapisms freely, and afterward cover the part with a broad flannel bandage, but I have seldom seen annoying tympanitis in this disease since using the sulphite of soda, and in only two instances the past year have I prescribed the ol. terebinth., the condition indicating its use not being developed in the other cases.

"The rationale of the above treatment of typhoid fever, so far

as the sulphite of soda is concerned, I am not prepared to expatiate upon; but in my opinion (and I have experimented faithfully and impartially with the remedy), it seems to have a marked effect upon the 'materies morbi.' How it would act in epidemic typhoid, I have had no opportunity of testing, but my confidence in it as a remedial agent would induce me to give it an impartial trial should opportunity present."

Dr. John L. Atlee, of Lancaster (Pennsylvania Transactions, 1870,) gives this account of his experience with a criminal who had taken poison:

"Upon entering the room I found the patient in bed, lying upon his back, his countenance flushed, and with a stern and almost demoniac expression; his pulse natural, skin moist, and his intellectual faculties perfect. Dr. Baker informed me that he suspected poison, and had endeavored to administer emetics; but that the patient had obstinately refused all medical assistance. While receiving this information a violent spasm seized the patient, which I observed was of a decidedly tetanic character, similar to those previously observed, and which affected all the voluntary muscles. I told the doctor that I was satisfied the patient had taken strychnia. He had frequently declared before his trial, that, if convicted, he would never suffer imprisonment.

"Finding the patient obstinately bent on self-destruction, the use of the stomach-pump was suggested, and Dr. B. went to procure it. In his absence I used all my endeavors to induce the patient to take the emetic, without avail, and while pressing the cup to his lips, I discovered that his jaws were firmly closed, that he had a full set of teeth, and that it would be impossible, in a man of his muscular strength and determination, to use the stomach pump. It then occurred to me that by the use of chloroform a double object could be gained—a subjection of the patient, and a relief from the spasms. I went next door to the druggist, where I found Dr. B. preparing the stomach-pump, procured two ounces of chloroform, and with him returned to the patient, whom I had left in the care of a student.

"While at the druggist's, I ascertained that at the April term of the court, when he had expected the trial to come on, the patient had purchased there 20 grains of strychnia. This confirmed suspicion as to the cause of the symptoms, and showed the evident bent of his mind. On our return we found the spasms increased in force and frequency.

"By means of a folded napkin the chloroform was applied to the mouth and nostrils; but no sooner was it done than he grasped the napkin violently with his right hand, tore it away, and openly defied me to administer remedies to him. I then

appealed to the gentlemen attending court, who by this time nearly filled the room, to assist us in holding down the patient, and by this means—having two persons to each arm and leg, and having the head firmly held, I was enabled to use the anæsthetic. In a few moments it produced its effect; his whole muscular system became relaxed; and he remained for ten or fifteen minutes perfectly quiescent. As soon as he was restored to consciousness, we found that a total change, mental, moral, and physical, had taken place. The spasms had left him, the expression of his countenance was calm and comparatively pleasant, and he was perfectly obedient to every request made of him. He took the emetic without difficulty, and we soon had the satisfaction of seeing his stomach thoroughly evacuated. He had partaken of a portion of his dinner before swallowing the strychnia, which probably prevented a more rapid absorption of it. At this time, about 3 o'clock P. M., I had to leave him, for three hours, under the care of Dr. B., with the understanding that he would re-administer the chloroform, should there be a recurrence of the spasms. At 6 o'clock P. M. I found the patient apparently well; there had been no spasms; his mind was calm, his temper placid, and he complained of nothing but weakness. He had a good night, and the next morning, although suffering from muscular debility, and some unsteadiness in his gait, he was brought before the court, and sentenced to confinement in the Eastern Penitentiary, where, a few weeks afterwards, he committed suicide, by hanging, in his cell."

C. Hasbrouck, M.D., (Transactions New Jersey, 1870,) after the interruption of the paroxysms in malarious fevers, relies upon the following as a tonic pill:

℞ Acid. Arseniosi, - - - - - - - - gr. 1-20;
Ferri Redact., - - - - - - - - - gr. j;
Quiniæ Sulph., - - - - - - - - gr. j;
Mucil. Acac., - - - - - - - - q. s.;
M. S. One such to be taken two or three times a day, for some time.

The same gentleman commends, for the relief of the severe pain accompanying Herpes Zoster, and also for the purpose of hastening the cure, the application of collodion once or twice a day, so as to keep up its compressing action on the skin.

Dr. C. H. Voorhees (New Jersey Transactions, 1870,) prescribed, associated with appropriate hygienic measures, the following, with success in a stubborn case of epileptiform seizures:

℞. Potassii Iodid., - - - - - - - - ℥ j;
Potassii Bromid., - - - - - - - - ℥ j;
Ammon. Bromid., - - - - - - - - ℥ ijss;
Potass. Bicarb., - - - - - - - - ℈ ij;
Infus. Calumb., - - - - - - - - ℥ vj;

M. S. A teaspoonful before each of the three meals, and three at bedtime.

Dr. A. P. Dutcher commends in the vomiting concurrent with the evacuation of a large cavity in phthisis:

℞. Acid. Carbolic, - - - - - - - - gr. iv;
Glycerin, Tinct. Cinnamomi, - - - āā ℥ j;

M. S. A teaspoonful every four hours.

Here are a couple of old formulæ whose uses are suggested by their combination.

J. G. Nichol gives this:

℞. Pulv. Opi., - - - - - - - - - ℥ j;
Acid Hydrochlor., - - - - - - - ℥ j;
Aq. Destill., - - - - - - - - - ℥ xix;

M. Shake daily and digest 14 days. Strain and filter.

Dose.—Twenty to forty drops.

℞. Gum Camphoræ, - - - - - - - - ℥ iij;
Chloroform, - - - - - - - - - ℥ j;

M. Ft Solut.

Rub this up with the yolk of a fresh egg, and add water q. s. for four ounce mixture. Each teaspoonful contains 5½ grains of camphor and 2 minims of chloroform. When kept long it requires to be well shaken again.

Malarial Poisoning.

From the *American Practitioner* we extract the following sensible observations:

"We are aware that it is contrary to the received opinion on the subject, but our experience has led us irresistibly to the conclusion, that the intercurrent congestions, irritations, and even inflammations which occur in marsh fevers should not be regarded as contraindications to the use of quinia.

"There is a peculiar cachexia produced by malarial poisoning, which commonly presents itself in subjects who have had repeated attacks of malarial fever, but may occur in those who, while exposed to the poison, have escaped the development of any febrile

phenomena. The most prominent symptom of this condition is a peculiar anæmia. The patient becomes pale, bloodless, with an icterode hue of the skin. Accompanying this condition, and often preceding it, is an enlargement of the spleen, which is sometimes tender on pressure, and almost always the seat of a vague, uneasy feeling, amounting, in some cases, to actual pain. In the advanced stages of this affection, œdema of the lower extremities nearly always appears, or there may be general anasarca, with ascites. In the treatment of this condition, removal from the malarial to a healthy locality is of the first importance. This, with chalybeate tonics, is usually sufficient for cure. Where, however, this cannot be done, iron, quinia and the regular and systematic exhibition of aperients are required. The following combination we have found most efficient in such cases:

℞. Sulphate of Iron, Sulphate of Quinia, - - āā ʒ j.
Sulph. of Strychnia, - - - - - - - gr. j.
Socotr. Aloes, - - - - - - - - ℈ j.
Mix. Make into thirty pills, one of which should be taken three times a day.

"We have seldom found it necessary to use any other remedy in malarial cachexia, whether attended or not by dropsical effusions. The iron and quinia seldom fail in these cases to reduce the enlarged spleen, in a few weeks, to its normal size. We have seldom found it necessary, in these cases, to resort to hydragogue-cathartics or diuretics. The iron and quinia, with aperients, seem to fulfill every indication of treatment in these cases. Citrate of iron and quinia has often yielded equally good results. The ferro-cyanuret of iron, which stands high in the estimation of some physicians in chronic malarial poisoning, is in our opinion inferior to either of the preceding. We have used in some obstinate cases, especially those attended by frequent relapses of intermittent fever, in alternation with the iron and quinia, a combination of quinia and arsenic, according to the following prescription, with very salutary effects:

℞. Quinia Sulph., - - - - - - - - ʒ j.
Liq. Potassæ Arsenitis, - - - - - ʒ iij.
Acid Sulph. aromat., - - - - - - ʒ j.
Tr. Rhei, Syrp. Zinziber, - - - - - - āā ʒ ij.
M. Signa. A teaspoonful three times a day after meals.

"We have purposely abstained from alluding to many of the long list of antiperiodics, so called, for the reason that in our hands a large number of them have proved themselves useless in the marsh fevers which are met with in practice, and because we have, in our opinion, a genuine specific for them in the sulphate of quinine."

Iodide of Potassium in Syphilis.

Concerning the use of iodide of potassium in syphilitic skin diseases, Dr. McCall Anderson lays down the following rules:

1. The longer the interval which has elapsed between the contraction of the syphilitic taint and the development of the eruption, the more likely it is to be of service.

2. If the patient is cachectic, it is, as a rule, to be preferred to mercury, except in recent cases of syphilis, when the mercurial vapor bath, or some such treatment, is more likely to prove successful.

3. The more extensive the tertiary eruption, the more certain it is to yield to iodide of potassium; although to this rule there are numerous exceptions.

4. If there is any tendency to syphilitic disease of the nostrils or neighboring parts, iodide of potassium should be withheld, or given with great caution, for, if it produces coryza, it is very apt to aggravate the morbid conditions of the parts.

5. It should be given in full doses.

In explanation of the last rule, Dr. Anderson states that he considers ten grains as the proper dose in the majority of instances, while sometimes as much as thirty or forty, thrice daily, may be requisite. As a typical prescription he gives:

Ferri Ammonio-citratis,	℥ iij;
Potassii Iodidii,	ʒ i;
Syrupi Zinziberis,	℥ vj;
Infus. Gentian Co.,	℥ viij;
Aquæ, Ad.,	℥ xxjv;

A tablespoonful in a large wineglassful of water thrice daily. —*Med. Gazette.*

Ice in Aneurism.

The *Medical Times and Gazette* records a case of successful treatment of aneurism of innominate artery, by application of ice bags. The patient was a man aged about 35. First noticed a swelling in the right side of the root of the neck, which increased very rapidly, so that in three weeks he was nearly suffocated by it, with excessive pain about the shoulder and behind the ears. The tumor was about the size of an orange, thin walled, with violent pulsations.

The man was at once put to bed and kept at perfect rest. A bladder of ice was applied over the aneurism, and this treatment has been kept up constantly since. For a while perfect rest was maintained, but free meat diet was permitted from the first, and the aneurism made marvellous progress towards recovery. There is no obvious prominence, and although one still detects a considerably extended area of impulse, yet this is quite quiet, and manipulation gives no pain.—*Ohio Reporter.*

Arsenic Hypodermically.

Dr. Lipp, of Graz, mentions six cases of psoriasis treated by hypodermic injections of arsenic acid. He has two solutions—one of three and the other of six grains of arsenic acid to one ounce of water, and injects from one-twenty-fifth to one-fifth of a grain of the acid daily. He had obtained successful results in three cases after having used respectively seven, three and one-half, and three grains of the acid. This method seems to present several advantages: in not deranging the digestive organs; in the smaller dose; and in the quicker cure. There occurred, in several cases, augmentation of thirst, with increased amount of urine, diminution of appetite, acceleration of the pulse, headache, vertigo, when the large doses were employed.—*Archiv. Dermat. und Syphilis.*

There has just been found at Paris a singular society that numbers already more than a hundred members. The members, by a formal clause in their wills, declare that they do not wish to be interred after their death; on the contrary, they direct that their bodies shall be given to the amphitheatres to be dissected. They form this resolution for the purpose of contributing as much as possible to the progress of that important science, without which a profound study of the art of healing is impossible. They expect, moreover, to help to do away with the prejudice against the dissection of bodies.—*Revue Therapeutique.*

Dr. Guyot gives from 30 to 60 grains of phosphate of lime in profuse perspiration, and especially in the night sweats incident upon phthisis pulmonalis. He mixes the phosphate with loaf sugar, and requires the patient to take a pinch of the powder frequently through the day.—*Ibid.*

Protracted Gestation.

Dr. L. L. Bedell reports (Leavenworth Medical Herald, August, 1870) having delivered a woman in her sixth pregnancy, June 12, 1870, 10 o'clock A. M., of a healthy female child, weighing nine pounds. After the delivery the mother informed him that her catamenia had ceased July 25, 1869, and that she had expected to be confined about the 1st of May, 1870; that in her previous gestations she had been able to calculate pretty accurately the period of her confinement. If this statement be correct, that her last menstruation ceased July 25, 1869, 10 months and 18 days elapsed before her delivery, or 322 days, and if we deduct 10 days after the disappearance of her menstrual flow, we will still have a period of gestation of 312 days.

Removal of the Whole Larynx.

In cases of malignant new growths in the larynx, which are beyond the possibility of extirpation, the question as to the removal of the whole larynx may be raised. This has recently been done by Dr. V. Czerny of Vienna, who has approached this question experimentally, and shows that in dogs the operation can be performed without great difficulty, and that the loss of the larynx is not necessarily fatal to them. Even if the epiglottis have been included in the removal, the dog can swallow his food. The respiration is carried on through a cannula. Dr. Czerny further experimented on the possibility of artificially supplying a dog in this condition with the means of phonation, and succeeded in this by adding to the upper part of the cannula a piece with metallic tongs. Every surgeon will agree with the conclusion of Dr. Czerny's interesting paper, that only the dreadful and hitherto hopeless state of patients with malignant laryngeal growths can justify the proposal of such an operation.—*Brit. Med. Jour.*

Obituary.

Charles H. Ray, M.D., Editor-in-chief of the Chicago *Evening Post*, died in this city, Sept. 23. Dr. Ray was born in Norwich, Chenango Co., N. Y., March 12, 1821, and removed to the West in 1843, commencing the practice of medicine at Muscatine, Iowa, but subsequently settling in Tazewell Co., Ill., where he pursued the practice of his profession successfully for several years. In 1851, he removed to Galena, and, somewhat accidentally, was induced to enter the editorial profession. In 1855 he became connected with the *Chicago Tribune*, with which he remained identified until Nov., 1863, when he sought other pursuits, but these not proving pecuniarily successful, in 1867 he returned to the editorial profession as Editor-in-chief of the *Evening Post*, which position he occupied at the time of his death. In January last, he was prostrated by "brain fever," but after some months he recovered so far as to resume his editorial duties. The immediate sickness which resulted in his death, commenced on Tuesday with fatal termination the ensuing Friday. *Post mortem* examination showed, however, that the previous attack had left permanent lesions, which, if known, would have precluded hope of recovery, although total cessation of mental labor might have prolonged his life. But it is difficult to imagine a brain, as active as was his, ever abstaining from work.

Had Dr. Ray continued in the practice of his profession, and employed, as he would have done, his extraordinary powers of mind in its scientific development, he would have easily grasped the highest honors it has to offer. Always, however, he was alive to every advance, and cheered the steps of progress. A writer in the *Tribune*, with which he was so long connected, and who knew him well, so adequately expresses our own ideas that we are glad to use the language which he furnishes to our hand:

"In our professional association with him, which has extended over many years, we learned to prize him as a man, and to hold him dear as a friend. He was not one, perhaps, to attract numerous friendships, for he was brusque and impetuous in his manner, and specially impatient of annoyance. But those who knew him best, knew how genial he was at heart, how strong his affections were, and how almost faultless he was in critical taste. He was intense in his likes and dislikes. He was bitter against an enemy, but he could not do too much for a friend. We have seen him fairly crush insincerity with an explosion of his wrath, and then turn and relieve the wants of a traveling beggar, and give him kindly advice. He was the best friend a young man commencing newspaper life could have, for the reason that he was chary of praise and never slow at pointing out faults and suggesting the remedy. Perhaps the most striking feature of his character was his hatred of cant and sham He recognized a hypocrite instinctively, and he never stopped to select choice or elegant phrases in exposing him. We cannot remember a man so plain-spoken in denunciation of humbug or hypocrisy. He hit it with all his might, and his might was immense. And yet, this Samson was full of humanity, kindly courtesy, and noble, hearty manliness. With all his multifarious duties, private and public, which were often very perplexing, he found time to devote much attention to literature and art, and in these directions his taste was fastidious, and his manner quick and resolved. He was as impatient of sham in a book, in a painting, or in the music room, as he was of sham in life, and his criticism was almost always just, even though it was excoriating. The class of men who cannot be politic enough to compromise with hypocrisy is so scarce that it is refreshing to recall this trait in Dr. Ray's character. It made enemies, of course, but that was of little account to him. The man who has no enemies must be all things to all men. He was a hard worker, and, in his prime, was capable of an immense amount of labor, for he was physically very strong. Few men in the journalistic profession, indeed, have combined such power to labor, such keen perceptions, such a nervous, trenchant style, and such manly and vigorous grappling with private and public evils.

Just such men as Dr. Ray was, are needed in the medical profession, and we would hold up the traits of character which characterized and ennobled our deceased friend to the emulation of all young men who link their future with its destinies.

New York State Inebriate Asylum.

The following announcement is respectfully submitted to the consideration of the medical profession, and to the public in general:

It is believed that the experience of the past five years has demonstrated not only the utility but the necessity of the institution known as the New York State Inebriate Asylum. We speak advisedly when we affirm that at no time has its prospects for usefulness been more promising, or has it been in so good a condition, so far as the treatment of patients is concerned, as it is now. We have sought to make it what it was originally intended to be, a reformatory christian home.

There are very many persons in our State and throughout the country, the victims of a terrible mania for drink, who need the salutary treatment which this Institution affords, and who, without such aid, must in all human probability perish. We, therefore, disclaiming every object except an earnest desire to aid in restoring to their friends and to society a class of men fallen indeed, but not beyond recovery, would earnestly commend this Institution as an efficient means for securing an end so important and inestimable.

We deem it proper to state, that ample means are provided to meet the physical, intellectual and religious wants of the patients. The Asylum occupies a remarkably healthful and beautiful site. It is furnished with baths, and a great variety of amusements; with a good library and reading room, which is supplied with the leading daily newspapers and the American and British magazines.

The rules of the Institution require *regularity* in regard to meals—the hours of retiring and rising—and the attendance on the religious exercises of the establishment.

The Asylum has been placed under the charge of Dr. Daniel G. Dodge, a man of superior administrative qualifications, and toward whom there is but one sentiment prevailing with the officers of the Institution and among the patients, that of profound respect for him as a christian gentleman, and confidence in him as a skillful physician.

Binghampton, N. Y., Oct. 1, 1870.

WILLARD PARKER, M.D.,
New York, N. Y.,
President Board Trustees.

REV. SAMUEL W. BUSH, *Register.*

To Soldiers and Sailors of Illinois who lost limbs in the late war.

At a meeting of the Illinois State Republican Association, held September 6, 1870, in Liberty Hall, Washington, D. C., the following resolutions were adopted:

Resolved, That a committee of three be appointed, of which the Corresponding Secretary shall be a member, to draft a circular letter, and forward it to the different newspapers in Illinois for publication, tendering to every soldier or sailor in the State who has lost a leg or an arm, the assistance of this association to enable them to take advantage, free of all expense to themselves, of the late act of Congress giving them artificial limbs, or a commutation in money instead.

Resolved, That this committee be constituted a permanent committee, and it shall be their duty to report to the association from time to time upon their action.

The President appointed, as said committee, A. B. Wicker, J. M. McNeill, Junius Simons.

The Committee, in carrying out the objects of the resolutions, would say to all those for whose benefit the action was taken, that Congress, in the exercise of its beneficence toward that class of our fellow-citizens, intended that they should have the benefit of the act free of any expense, and so framed the law that the intervention of attorneys and claim agents would not be necessary to the adjustment of the claims.

Applications should be made by officers of the Army and soldiers direct to the Surgeon-General, from whose office the necessary blanks will be furnished on request. Officers of the Navy and seamen should apply for blanks to the Chief of the Bureau of Medicine and Surgery, Navy Department, Washington.

Any further information desired or assistance wanted in the procurement of the artificial limbs or commutation in money, provided by the act, can be had by addressing any one of the committee at Washington, D. C.

THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery, and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.; AND WALTER HAY, M.D.

VOL. XXVII.—DECEMBER, 1870.—No. 12.

Original Communications.

ARTICLE I. — *Injury of the Head — Abscess, with absence of Symptoms — Trepanning — Post Mortem Examination.* By C. T. PARKES, M.D., Demonstrator of Anatomy in Rush Medical College.

On October 8th, 1870, was called to see Mr. T. Q——, who, two hours previous to my arrival, had been struck on the head with a stone of some kind, in a quarrel. The blow knocked him down. Did not gain any history of unconsciousness. He was perfectly sensible when I reached him; had no pain or dizziness in the head; expressed himself as greatly concerned about the shame of the quarrel.

Examination showed me a contused wound just external to left frontal eminence, extending through the scalp, and about an inch and a quarter long. Also, a clean cut, T shaped, wound, at the upper and back part of the left parietal bone, extending through scalp and pericranium, completely denuding the bone; long arm of cut an inch and a half long, and short arm half an inch longer.

The man was bleeding per saltum from the latter wound, and had been bleeding thus ever since receiving his injuries. By placing a finger upon the divided artery of the wound and hold-

ing it a few minutes, all hæmorrhage ceased; upon changing his position to dress the wounds, the man fainted, showing that his loss of blood had been very severe. He soon rallied; I then examined the skull thoroughly for fracture or depression, and found neither. The wounds were closed by sutures — two in the wound on the back of the head, and one in the cut on the front; water and whisky dressings, to be applied tepid.

The man put on his hat and walked home, feeling, as he expressed it, "all right."

Oct. 9th. Feels well, and wounds looking nicely; pulse 72, no headache.

Oct. 10th. Wound on back of head looks angry; a pretty well marked puffy tumor surrounding it. Took out the sutures, allowing about a teaspoonful of healthy pus to ooze from the wound; ordered the application of a good warm poultice.

The wound on the forehead still looking well; seems to be union by first intention; complains of a little headache; pulse 80. Gave two compound cathartic pills; ordered to keep in bed.

Oct. 11th. Wound on back of head still quite angry and inflamed; the surrounding puffiness increased. Broke up all slight adhesions in the wound, and gave exit to considerable quantity of pus; continue poultice. Wound on front of head swollen, puffy, and painful; took out the suture; broke up the adhesions slightly with the probe, and got pus; ordered poultice to this wound. Found every little scratch and abrasion on the man's scalp suppurating and painful; opened all the little pockets; headache increased; bowels freely moved; pulse 84. Directed light diet and quietude.

Oct. 12th. Man better, decidedly; pulse 76; headache gone; wounds suppurating slightly, and beginning to look healthy; puffiness gone; probed the wound at back of the head, and thought I got the ringing sound, as from "necrosed" bone.

Treatment continued.

13th and 14th. Doing well; appetite good.

15th. Doing well; discontinued poultices, and applied ointment of Carbolic Acid Cryst. gr. v, to ℥j Resin Cerate, spread on Oakum, to the wounds.

During next week seemed to be doing quite well; appetite was not very good; vomited his food once or twice; attributed his

want of appetite to the confinement upon which I insisted for fear of brain trouble; he had always been an active, hard working man. The wound on forehead healed up entirely; that on back of the head was healing rapidly towards the centre of the crossed cut. Satisfied that he had quite a piece of "necrosed" bone at the bottom of wound. The pulse during this week never passed beyond 80 beats per minute.

Oct. 25th. Patient thought the "dead bone" should be removed; advised him to wait until nature loosened it. Took him to see Professor Gunn, of Rush Medical College. He confirmed the diagnosis; advised the patient to await the efforts of nature at separation; to make use of a more generous diet, and to take a little more outdoor exercise.

From this until October 28th, noticed no adverse change in the patient; did not complain so much of nausea; in fact, said he "didn't feel sick." The wound on the back of the head had healed, all but an opening sufficiently large to admit the probe. Bowels freely open.

On the 28th of October found him anxious and worse; pulse 84, and a feeling of numbness in right arm, the side opposite to site of injury. Told him to keep perfectly quiet, and that I would bring Dr. M. Gunn to see him early in the morning.

Oct. 29th. Dr. Gunn and myself saw the man at 9 A. M.; found him speechless, with laborious breathing, and paralysis of the side opposite to the seat of injury; pulse 108, and jerking; evident symptoms of compression. Dr. Gunn trephined at the site of the wound on back part of the head. On the removal of the outer table of the skull, we found quite a quantity of pus in the "diploe"; under the inner table there was a thick layer of lymph covering the dura mater. The dura mater did not bulge into the trephine opening; the pulsations of the brain were visible; the lymph showed several specks of degeneration into pus.

After the operation the man's countenance looked brighter; his pulse fell to 84, and in answer to the question if he was better, he said, "I am"; improved by the operation. In the afternoon found him no better; all the morning symptoms present. He gradually continued to grow worse until the morning of Nov. 1st, when he died—three weeks and three days after receiving his injury.

Post mortem seven hours after death made by Professor Moses Gunn, Dr. Ben. C. Miller, county physician, and myself. On removing the scalp, no evidences of either fracture or depression were visible on the outside of the calvarium. On removal of the calvarium, no evidence whatever of any injury to the inner table of the same could be found. There was a slight deposit of lymph on the dura mater at the site of injury. The vessels of the membrane in this neighborhood slightly congested; no other evidence of meningeal trouble present. On cutting open the dura mater, found the arachnoidian cavity free from fluid, and the parietal and visceral layers of the arachnoid membrane bright and glistening, seemingly perfectly healthy. Beneath the visceral layer of the arachnoid membrane, on the surface of the cerebral mass, we found a well defined layer of yellow lymph, spread over the posterior three-fourths of the left cerebrum, and extending slightly on the anterior portion of the right hemisphere. The lymph was oldest and thickest immediately beneath the site of injury. Here it was about one-fourth of an inch thick, and left a smooth surface upon being cut into.

The substance of the brain presented nothing noticeably abnormal. Upon opening the lateral ventricles, each discharged at least one ounce of serous purulent fluid.

During the whole course of his illness this man never showed any symptoms which pointed positively to trouble with the brain, until October 28th, unless the want of appetite was a symptom indicating it. He complained of no headache, except four or five days after injury, when all the wounds took upon themselves unhealthy action. When they improved, the headache departed. At this time, when suppuration was at its height, the pulse rose to 84 beats per minute; at all other times it was below 80, until the 28th, when it came up to 84 again. On the 29th—day of operation, 108; day of death, 120.

The man was kept as quiet as possible during the whole time, without being absolutely in bed. The case is surely instructive in indicating a guarded prognosis even in seemingly trivial injuries to the head.

ARTICLE II.—*A Case of Traumatic Tetanus, treated with Hyd. Chloral.* By A. H. KINNEAR, M.D., Metamora, Ill.

On Monday, Sept. 19th, 1870, a summons came to my office requesting my services some three miles east of town, to see a little German boy, eight years old. I was not at home when the messenger arrived, who stated that his orders were, if I was not at home, to have my student, Mr. F. G. Roberts, visit the boy until I returned. Mr. R. rather reluctantly answered the summons, and found the little boy strangely affected. He did not wish to administer any medicine until I could see the case, and got permission of the parents to bring the boy to town, and have him remain over night at my house, so that I might see him that evening, as it was nearly sundown when the summons came. Shortly after the boy was brought to my house I came home, and was not a little surprised to find a marked case of tetanus. The little fellow was suffering terribly from the persistent rigidity of the muscles of the lower jaw, the neck, and of the trunk. Opisthotonic spasms at intervals of from half to one hour. During these spasms, the whole body would be bent backward in the form of an arch, resting upon the occiput and sacrum. Trismus persistent; could not open his mouth more than half an inch; deglutition slow and difficult; pulse normal, except during the paroxysms, when they would become a little accelerated; no trouble in voiding urine.

I learned the history of the case to be as follows:

On Friday night, the 16th, this little boy fell out of the bed on the floor, striking on the back of his head and spine, but got up and went to bed again, not complaining of its hurting him, at the time, further than a stunning sensation; slept well the remainder of the night. The next morning, the 17th, the parents noticed that he acted strangely—also, an unnatural expression of the features, but gave themselves no uneasiness until late that afternoon, when they noticed that he could not articulate distinctly, mastication and deglutition rather difficult, and the muscles of the jaw becoming stiff.

During the night he slept but little, consequent upon pain and occasionally a light spasm. The next morning, the 18th, they

observed that the muscles of the neck and trunk were becoming stiff, with opisthotonos at long intervals, but not very severe.

He continued in this condition, the characteristic symptoms becoming more marked, until Monday, the 19th, when some of the neighbors prevailed on them to have a physician called; the parents thinking, all the time, that his condition resulted from cold, which he would probably recover from in a short time, without the interference of a physician.

The above being the facts in the case as near as I could gather them, I diagnosed the case traumatic tetanus, as the boy was in good health at the time of the accident, and had been all his life, although I could discover no abrasion of the skin, only a little tenderness at the upper half of the cervical spine.

Being aware that recovery from this disease is the exception, and death, so to speak, the rule, I was at a loss to know what would be best, in the case, to relieve the rigid condition of the muscular system, from which the vital forces were fast being exhausted.

The authorities state that there is no remedial agent that can be relied upon in this affection. This being the state of affairs, I felt justified in experimenting in the case, and, therefore, concluded to try Hyd. Chloral. I administered fifteen grains in solution, and in twenty minutes he dropped off into a quiet sleep, and slept about one hour; then awoke suddenly in a spasm, which lasted about one minute. I then gave him twenty grains more; he went right to sleep, and slept very quietly the greater part of the night, awakening twice, partly, only, in a light spasm. The next morning, without my knowledge, he got up, and dressed himself, saying that he felt better. He could open his mouth a little wider than the evening before, but not sufficiently to take food except in a semi-liquid form. After breakfast I gave him fifteen grains more of Chloral, and had him removed to his home, with orders that he should be placed in a recumbent position, and remain perfectly quiet; nourishment to be given every four hours, the Chloral every six hours, twenty grains at each dose.

The next morning, the 21st, I found my little patient very much relieved. He had rested quietly all night; the muscles of the jaw were more relaxed, also of the neck and trunk; but those of the lower extremities were becoming a little rigid. Had only four attacks of opisthotonos since he left my house, which were

not so severe, and shorter in duration. I gave him one ounce of Castor Oil and five grains of Calomel, and continued the Chloral in the same doses as before, at intervals of six hours, or oftener, if it became necessary.

The 22nd, my patient rested well through the night; the calomel and oil had produced copious evacuation from the bowels; the muscles of the jaw, neck and trunk still more relaxed; he could eat a little this morning. Had no spasm since I last saw him, but the lower extremities more affected; continued the Chloral and nourishment the same as at last visit.

23rd. Still improving; nearly relieved of the trismus; rested tolerably well through the night; had two opisthotonic seizures since my last visit, one of which occurred during the night. The rigidity of the muscles of the lower extremities, however, no better, and during the spasms the penis would become erect with contraction of the scrotum and drawing up of the testicles, so much so as to cause great pain in the parts; the bowels moved freely twice. Continued the Chloral in the same quantity at intervals of eight hours, and added Bromide of Potassium in solution, twenty grains at each dose, to alternate with the Chloral; nourishment to be increased in quantity.

24th. Gradually improving in every particular. But one spasm since my last visit, caused by imprudence. The scrotum remaining in a contracted condition, but causing no pain; considerable stiffness in the muscles of the thighs, but not quite so rigid; the pulse more frequent than at any time previous, in consequence of exhaustion; respiration natural; no difficulty in voiding urine. Continued treatment the same as at last visit.

25th. Improvement more marked in general appearance than at any time previous, trismus having nearly or quite subsided; can articulate very distinctly; takes food as readily as before being affected; had two very light spasms, one while I was there, which seemed to affect the muscles of the thighs more than the trunk, and as soon as this passed off, the whole muscular system became relaxed, except the muscles of the thighs.

I now began to feel very much encouraged about my patient's recovery, as this was the ninth day since the disease first began to manifest itself. Having succeeded in relieving almost entirely the trismus, the rigidity of the muscles of the neck and trunk, the

only remaining difficulty now was to relieve the stiffness of the muscles of the lower extremities, and tone up more thoroughly the whole system, which had become very much reduced from the long continued contraction of all the voluntary muscles. I continued the chloral and bromide in less quantity, but at shorter intervals; nourishment to be increased in quantity; and decided that at my next visit, if the contraction of the muscles of the thighs continued, I would try the effect of morphia (sulph.) hypodermically, and the electric current. Left my patient, expecting to see him the next day.

26th. On my way out this morning to visit my patient, I met the father of the boy, who informed me that through the influence of a brother-in-law, who had called in to see the boy for the first time since his illness, he had been persuaded to call another physician of this place, of greater experience, to take charge of the case, without informing me. The physician in question pronounced it *rheumatism*, and treated it, I presume, accordingly. Seven days more elapsed, and the boy was a corpse.

This is rather an incomplete case to report, but as I took notes in full from the start, with the object of reporting it in the JOURNAL, I feel desirous yet to do so, as far as I was connected with the case, to show the influence that the hyd. chloral has in ameliorating the rigid condition of the muscles in this affection. I am inclined to believe that this is accomplished more through its hypnotic influence than that of any other. Its effects were beyond my expectation. The bromide, probably, had some effect in allaying nervousness, but to what extent, in this terrible affection, I am not able to say. There seems to be no danger in keeping the system thoroughly under the influence of chloral, any reasonable length of time, and by this means we succeed in procuring rest and quiet sleep for our patient, which has a marked tendency to interrupt the tonic spasm of the muscles; and I have great reason to believe that the treatment adopted in this case, if it had been followed, with plenty of nourishment, would have been successful, and that the patient would have recovered.

ARTICLE III.—*Read to the Muskingum County Medical Society.*
By A. BALL, M.D.

The case reported in the CHICAGO MEDICAL JOURNAL, by Dr. McElroy, entitled "Clinical Experience in Private Practice, from a Physical Basis of Life," requires some corrections and some comments.

Being called in council with Dr. McElroy, on April 5th, and seeing the boy only twice, that morning with Dr. M., and the same afternoon, at his request, in his absence, I can only speak of facts as they occurred under my observation. About 8 o'clock that morning Dr. M. called at my office, saying he had a very singular case in young Patterson. He had visited him the day before and again that morning, and found him getting worse. He asked me to see the case with him, stating that he had called before for me, and regretted that I was absent, as he thought if ammonia had been injected into his veins, then there would have been some hope of saving the patient; and, as it was a case presenting no hope under any other treatment, the experiment would be perfectly justifiable. "But now," he remarked, "I fear it is too late to do any good."

On arriving at the house, we found the boy throwing himself about the bed in an unconscious state. His surface was cold and livid. Froth was working from his mouth, and he was pulseless at the wrist. Dr. M. examined his pulse first at the wrist, saying there was no pulse at that point. He then felt in the axilla, and called my attention to the fact that there was a feeble pulse in that location. I then examined carefully, and fully corroborated his statement: finding no pulse at the wrist, none at the bend of the elbow, but a feeble, fluttering pulse in the axilla. I have no recollection of either of us attempting to count it; the pulse being so feeble, and the boy so restless, it would probably have been fruitless to do so. Placing my hand on the chest, I found a *rough, harsh* respiration, interfering, by the accumulation of partially dried mucus in the small bronchi, with the respiration, owing to the loss of sensibility, and physical prostration.

On retiring to consult, I was not a little astonished and alarmed on learning that the boy had taken *three ten-drop doses of Veratrum Viride in as many hours.* My first thought was how to

counteract the effect of the Veratrum, which had been taken in what I considered such unjustifiable and dangerous doses. We had no difficulty in agreeing upon the treatment, which was brandy and milk, and hydrate of chloral, in about seven-grain doses, every hour until rest, and a jacket of mustard poultice over the entire chest. Dr. M. was compelled to be absent through the day, and requested me to see the boy at noon. I saw him at two o'clock P. M., and was informed that *he had neither vomited nor purged* between my first and my second visit. But, under the change of treatment, he had rapidly become quiet. He had perfectly reacted. His surface was florid. His pulse was active, *even feverish.* The breathing was full and easy, and the boy seemed partially conscious. I at once ordered the stimulants stopped, and directed a resumption of Veratrum in *two-drop* doses every two hours, until the fever should subside. I did not see him again during his sickness, but was informed daily of his improvement.

I have reported the *facts* thus in detail, because in some important particulars they differ from the statements made by Dr. M., and also that each may judge for himself *what remedies promoted and what retarded the recovery* of the boy, without reference to whether they *sustain* or *condemn* the treatment "from a physical basis of life." With all deference to Dr. M.'s opinion of the case, as to the remedies which were beneficial, I am constrained to regard the depression as largely due to the veratrum; and but for the prompt use of the brandy and the chloral, we would have had a fatal termination. I hope the facts in this case will be a warning to others to avoid the reckless use of so potent and so dangerous a remedy as that upon which Dr. M. so much relies. I am at a loss to see how an impartial seeker after true therapeutic effects can regard veratrum as other than a *hindrance* in this case. It shows that when a theory is adopted by one as enthusiastic as my friend, he can only see results of certain treatment as he may imagine them to comport with his theory. It will be seen by the above that Dr. M. *had no hope of his case under the veratrum treatment*, and considered it too far gone for his ammonia experiment, when he adopted the brandy and chloral treatment. It will also be seen that *he had forgotten the facts* when he stated that the pulse was perceptible at the wrists at the

time we were in council. He is further and *materially* in error in stating that there was vomiting and purging *after the chloral and brandy* were given, as *neither* occurred between my visit in the morning and that in the afternoon. And, as to the chloral being "inert," it was followed by the *only result hoped for* when we ordered it, viz., rest and reaction. And its result was much more prompt and efficient than either of us anticipated. Permit me to say that I regard the case as one of a wonderful escape from overdosing with veratrum, and but for the "little jar due to the consultation," the boy would now be numbered with the dead. Indeed, I think the result would justly authorize us to classify chloral hydrate as one of the antidotes to veratrum in overdoses.

To review the facts: the boy was found in an insensible state, pulseless and prostrate. Three fourths of an ounce of chlorate of potash is given during the night. He is pulseless and prostrate in the morning. Tincture of Veratrum Viride is given at 5 o'clock in the morning. Dose 10 drops, which is repeated at 6 and 7 o'clock. We visit the patient at 8 and find him worse, more restless and more prostrate. He has vomited and purged unconsciously in bed; is pulseless at the wrist, and all are of the opinion that he is dying. In this condition we find the patient, when brandy and milk and chloral are ordered, together with a mustard poultice enveloping the whole chest. Everything else is stopped. The vomiting and purging cease. The restlessness soon subsides. The surface becomes florid; the pulse is fully restored at the wrist, and consciousness is returning. Now let me ask any reasonable man what remedies gave the boy relief. I will not attempt to insult your intelligence or judgment by suggesting an answer.

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[ZANESVILLE, Nov. 2, 1870.

Messrs. Editors: It was agreed by the Society, that the remarks of the several fellows, on the reported case of Drs. McElroy and Ball, should be published in the JOURNAL, but the Secretary did not note the remarks at the time, nor have the members who participated at the time furnished him such. Suffice it to say, that Drs. Culbertson, Bell, Hildreth, and Prof. T. A. Reany, spoke condemnatory of the treatment, as given by Dr. McElroy.

J. R. LARZELERE, Secy.]

ARTICLE IV.—*Clinical Experiences in Private Practice—the Modus Operandi and Therapeutic Uses of Veratrum Viride.* By Z. C. McELROY, M.D., Zanesville, Ohio.

The consulting physician referred to in my recent report of a clinical case,* read a paper to the Muskingum County (Ohio) Medical Society, at its August session, 1870, taking exception to the statement of fact in the history of the case, as published, during his connection with it, as well as the therapeutical conclusions drawn from it, which, by a resolution of the society, was ordered to be forwarded to the CHICAGO MEDICAL JOURNAL for publication, with the debate on the whole case. I voted for the resolution, and hope you will open your pages for their insertion; and, appended, this, my reply, for the reason that it is my impression it will do good.

The matter of the facts of the case, as published, may be safely referred to the parents of the child, whose statement, made at my request, is here annexed.† And, with that, the question whether my report of the case is correct or not may be safely dismissed. I, however, again declare, that the case as reported and published is substantially correct, as nearly so as it is by words possible to reproduce any case, with reference to critical judgment on its therapeutic management.

The part played by Veratrum Viride in the case is the real point at issue. Did its influence tend to carry the patient through the crisis? Or did it place him in greater jeopardy than he was before its administration? The purpose of this paper is to try to furnish solutions to these inquiries.

It is much to be regretted that the "impressions and opinions" of gentlemen in the scientific world, are not at all times held subject to correction by accomplished facts in reference to anything, even to the matter of the dose and mode of administering any therapeutic agent, let it be Veratrum Viride or anything else.

The fact that the patient was substantially convalescent in four

* Chicago Medical Journal, July, 1870.

† [The letter from the parents, containing the statement referred to by Dr. McElroy, is in our possession, but we deem its publication unnecessary. —EDS. JOURNAL.]

or five hours after the last dose of ten drops—thirty drops in all, from six to eight o'clock—cannot be explained away, or got over. He did get thirty drops in something near two hours—did vomit and purge involuntarily, and at the close of the "depressing effects" was substantially convalescent, and is here, alive, to-day, to show that thirty drops Fld. Ext. Ver. Viride, given, ten drops at a dose, at intervals of one hour, until he had taken three doses —thirty drops in all—did not finish him when he was already so near dead.

The author of the paper, and so many of the fellows of the society as participated in the debate, evidently consider, and indeed stated, Veratrum Viride to be a most virulent poison. And as no one of them defined what they understood by a poison, to get at their probable mental impressions reference must be had to lexicons.

Webster's definition is, "any agent capable of producing a morbid, noxious, or dangerous effect upon anything endowed with life." Dunglison's, "a generic name for all substances which, when introduced into the animal economy, either by cutaneous absorption, respiration, or the digestive canal, act in a noxious manner on the vital properties, or the texture of organs."

And these definitions may very properly be compressed into the conception of a gentleman whose wife had taken a little too much Belladonna for her asthma, for their ideas of her personal safety and comfort. Though prescribed by a physician, both husband and wife thought the exchange of her difficult breathing, for the apparent cutaneous heat, confused mental faculties, and nearly suspended vision, rather a poor bargain. And while he was soundly berating physicians for prescribing such "pisens," I asked him this question, "Mr. Palmatry, what do you understand by poison?" "Pisen, pisen, why, pisen is something that kills people."

This reply induced me, at that time (about a year since), to make further efforts to get at what was the prevailing mental conceptions in the popular and professional mind as to what was poison, and this reply of Mr. P. was found to reflect them very accurately in this city and county. And this debate, in connection with the definitions introduced here, from the lexicons in use by both people and the profession, shows, with tolerable

accuracy, that the professional does not materially differ from the popular understanding as to "What is poison?"

However proper these conceptions may have been only a quarter of a century since, they are extra scientific in 1870, and not much to the credit of any gentleman, claiming to be scientific, who holds them.

But, working on this popular idea, or mental conception, of what is poison, how do the impressions and opinions of these gentlemen compare with the facts on record, "by authority" of the profession? Is Veratrum Viride a poison at all? Did it ever kill anybody? Did it ever produce noxious effects? or morbid? or dangerous?

Prof. Wood* says, "These signs of prostration are sometimes so great as to be alarming; although I have seen no account of fatal poisoning."

Prof. Stille† says, "Alarming and apparently dangerous as these symptoms are, it does not appear that they have ever terminated in death. On the contrary, they have been dispelled with facility by merely suspending the use of the medicine, and administering diffusible stimulants."

Profs. Wood and Bache‡ are silent in regard to any dangerous or fatal effects. Nothing—not a word—is said about fatal poisoning. And if there is a recorded death from Veratrum Viride, it has never fallen under my observation.

Prof. H. C. Wood§ experimented with two alkaloids, obtained from the Veratrum Viride, Viridia and Veratroidæ, by hypodermic injections, on inferior animals. Viridia he found to depress directly the heart's action, and death by paralysis, but no post-mortem lesions of form, or vomiting, or purging before death. Veratroidæ he found, also, to depress the heart's action, death by asphyxia, violently emetic, sometimes cathartic, locally irritant, but no post-mortem lesions of form. With the resin of Veratrum on man, his experiments resulted, not in depressing the heart's action, but dyspeptic symptoms.

* Therapeutics and Pharmacology, II, 154. 1856.
† Therapeutics and Mat. Med., II, 343. 1860.
‡ U. S. Dispensatory, 1865.
§ Am. Jour. Med. Science, Jan., 1870.

So much for "authority;" and, in so far as authority deals with facts, none can yield more readily or gracefully to it than myself. But, in so far as "authority" deals in opinions and impressions, or inferences, it is known that for these there is in my mind little reverence. Opinions I can manufacture by the mile daily, and their value will be inversely to their length or number. Scientific conclusions and inductions are, with me, the result of mental and physical pains-taking labor, and needful delay, to obtain all possible accuracy.

My acquaintance with Veratrum Viride commenced about twenty years since, and for not quite half of that time I held opinions concerning it not materially different from those brought out by this discussion.

A dearly-loved female relative, who passed away ten years since, took, for several months before her death, a combination of Veratrum and Aconite, twice daily, to produce vomiting. They were combined, because results were obtained from both, which did not follow either separately, the reason for which will appear before I get through with the subject. At 9 o'clock in the morning she took the requisite dose, was sick by 10½ or 11; ready for her dinner soon after noon; in her carriage for a ride on all pleasant days, as free from discomforts as an incurable invalid could be; usually returning in time for supper. At 9 o'clock in the evening the same thing was repeated, falling asleep usually before midnight, and resting tranquilly till morning. This was found, by experience, to be the only way in which the inordinate working of an enlarged heart—a heart that had lost its normal form*—and, as a result, its normal function—and a plainly-to-be-seen aneurism of one of the external carotids—could be so controlled as to obtain the comfort she had from noon till evening, and from midnight till morning. All other means had been tried, and failed to give a moment's relief from the terrible — truly terrible restlessness which so soon overtook her after the effects of the Veratrum had passed off. She dreaded the vomiting all the time, would gladly have escaped it, but she dreaded the terrible restlessness more, and so, meekly and cheerfully submitted to the

* Chicago Medical Journal, January, 1870, p. 14.

effects of the Veratrum; and it is proper to say, that under the vomiting dose, she did not obtain relief.

This opened my eyes, and enlarged my knowledge of Veratrum Viride. Had it been such an active and virulent poison as my fellows in the society insist on, this lady should have died from "symptoms of poisoning" months before she did. When her death did occur, it was peaceful, and, at the moment, unnoticed by an attentive and vigilant daughter, in her room, and sitting but a few feet from her at the time, as if she had only fallen asleep. She returned from her ride at 5½ in the afternoon, and before 6 o'clock she was dead.

A few months after this lady's death, a small child, perhaps a year old, daughter of Mr. Uriah Sharp (now a young woman, hale and hearty, and seen within a few days), helped herself to a vial containing about half an ounce of the tincture, and, unnoticed, swallowed its contents. As, in prescribing it in the family, I had explained to them that it was an active poison, and had it so labeled, they were greatly alarmed, and sent for me immediately. The mother had had presence of mind to compel the child to drink some mustard water, so that I found her vomiting. Placing the child's head very low, permitted it to vomit. It became very pale; pulse sunk down very low, perhaps below 40, though not counted at the time. At a proper moment, a little spirits and paregoric was administered, repeated as it was thrown up, until the vomiting ceased, and the pulse rose in frequency. Returning in a few hours, found the child, to my very great surprise, playing, as if nothing had happened.

I was considerably wiser in regard to Veratrum Viride in consequence of this accident.

Not long after this occurrence, and during the same year (1861), I had two patients in one house, both married females, under treatment for continued fevers. For one of them Veratrum had been prescribed, so that she would get eight drops in a teaspoonful of a mixture, once in six hours; and a Citrate of Potassa mixture, of which she was to get a tablespoonful every two hours. By mistake, the Veratrum mixture was given in tablespoonful doses every two hours from morning till evening. At my evening visit, she was found sick, very sick, at her stomach, had a ball in her throat which she thought would soon smother

her, had vomited quite a number of times; pulse very slow, skin very cool, and, in professional technology, "greatly prostrated." The cause was soon ascertained, and a glass of brandy, with some paregoric, administered, with speedy relief. This patient, though considered much the worse of the two, recovered at once; but in the other case, which did not get Veratrum at all, the fever ran a course of three weeks.

I did not fail to learn something from this mistake, too. And to mistakes, sometimes my own, but more frequently others', I am indebted for much of the knowledge I now esteem valuable in my vocation. Early in my professional career, incidents began to undermine my confidence in the validity of what I had been taught in regard to therapeutics, as a medical pupil. They culminated in my setting about, a year or so after these occurrences, studying the problem, "How do medicines produce their effects?" the results of which were communicated to the profession in a monograph, near the close of 1868.* By this time, and in consequence of this labor, my knowledge of Veratrum had been considerably enlarged. Working away at the problem, the physical, physiological, and dynamic unities of organic life were reached toward the close of the year 1869, and first communicated to the profession in the January number of this JOURNAL for the present year (1870). But before this time, I had determined, by experiment, that the best results of Veratrum were realized from a single large dose, given to produce vomiting and the very "depressing effects" so much feared by the fellows of the society, and to caution others against a like dangerous use of the drug, was the purpose of the paper, debate, and its publication.

From this gradual accumulation of empirical personal experiences, extended over twenty years, my deliberate judgment now is, that a teaspoonful, or, for that matter, an ounce, given at a single dose, to produce these identical "depressing effects," so much deprecated by certain fellows, is, for certain conditions, accompanying high temperatures (105° to 108°), rapid circulation, great jactitation and restlessness, very much safer, and followed by infinitely better results, than when given in smaller doses,

* Chicago Med. Jour., March 1, 1869, p. 157.

simply with the view to controlling the heart's action. This condition of things is mostly due to retention of the results of tissue metamorphosis, for which I find no designation more accurate and expressive than dead matter, for the expulsion of which the very excessive motion is set up in the interest of waste, of which the jactitation and restlessness are mere incidents. And it seems to me that these better results are due to the elimination of this dead matter, or results of tissue decay. With such a view and purpose it was given to Albert Patterson, when the other measures instituted to the same end had failed, and it seems to me the results were satisfactory, and expectations founded on this purpose were fully realized.

The consultation, I own, did temporarily unsettle my purpose, from 8½ A. M. to 5 P. M., but it was then resumed, and never deviated from till its close; I had no occasion to regret it, and think I learned something from the episode.

Had Albert received brandy, and "diffusible stimulants," so called, it seems to me tolerably certain, that Mr. and Mrs. Patterson would have had a funeral from their residence within a couple of days, and I should not have met and spoken with him only yesterday (August 22, 1870).

Since Albert's case was treated, I have given it in half and teaspoonful doses a good many times, and with uniformly and altogether satisfactory results. The conclusion, then, is forced on me by these experiences, that this is one of the proper and legitimate uses of Veratrum Viride in practical therapeutics.

Science is cosmopolitan. Her temple has no side or back door, through which to smuggle a falsehood, so that it may pass for a truth or reality. If a teaspoonful of tincture or fluid extract of Veratrum Viride can be safely given in Zanesville, it will be equally safe to repeat it in Chicago, London, St. Petersburgh, or Melbourne, under like circumstances. But art is not so. Chicago may at this moment hold a human hand, or human head, which can do that which not another in the world can do so skillfully. And I aver that a teaspoonful of a good article of tincture or fluid extract Veratrum Viride can be given, even by inexperienced hands, to check excessive motion, and eliminate dead matter, under such circumstances as were presented in Albert's case, in Chicago, Zanesville, San Francisco, or any other

place, and at any time, without fear of death from its "depressing effects," or "poisonous results," such as were pictured to the society during the debate.

All that any therapeutic, remedial, or hygienic agency, or measure, can, by any possibility, do, or any mode of force, mechanical, chemical, or physical, to any human body, sick or well, dead or alive, can be merged, nay, will go without violence, or straining, or distortion, into one of these three classes; and cannot be made to go into any other, aiming to be fundamental or ideal unities, viz.: 1st, Retarding motion in the interest of repair or waste, i.e., constructive or destructive metamorphosis; 2nd, Promoting, or accelerating motion in the interest of repair or waste; 3rd, Changing the molecular forms of structure, or tissue, or viscera. I repeat, that nothing on, above, or below the earth's surface, can do anything else than one of these three things, to a human or organized body, dead or alive.

Aside from my own experiences, those of Prof. H. C. Wood, so recently reported, and heretofore alluded to in this paper, demonstrate that neither Viridia, Veratroidæ, nor the resin of Veratrum, changes the molecular forms of structure, as small pox, scarlatina, etc.; and, therefore, as it only influences motion, or chemical changes in the molecular forms of structure, that influence, when accompanied or succeeded by elimination, by vomiting, or vomiting, purging and sweating, does not, or rather has not, up to this time, "killed" anybody, and will not be likely to, so long as it is followed by active elimination.

Prof. Wood thinks that in Viridia the profession has a remedy, by means of which, "all the peculiar sedative influence of Veratrum Viride can be obtained, without the horrible nausea and vomiting which always occasion so much discomfort, and, in some instances, endanger life." He does not say that it does anything more than "endanger life." And suppose that his expectations in regard to Viridia are realized, it will prove to be a much more dangerous agent than the tincture of the whole drug; and for the reason that the "horrible nausea and vomiting" are absent, which are the sure guarantees of safety to life. It must, then, be placed with aconite, gelseminum, and chloral—agents which retard motion without elimination, and, therefore, agents which can, and will, in large doses, destroy life. The popular, as well as profes-

sional, ideas of "virulent," or "deadly," or "active poisons," are all based on the velocity with which motion, or chemical changes are promoted, retarded, or arrested, or forms changed. The form-changing "poisons" are, virus of serpents, insects, etc.; combustion (burning); mineral acids, (concentrated); certain salts, as chloride of zinc; the concentrated alkalies, and their oxides, and included in this class are the physical forces, falls, mechanical violence—as by machinery; blows; bullets and bombs, etc., etc.; for the reason that, if they do not change forms of molecular structure, they rarely, or perhaps never, destroy life. And the measure of danger is the extent of the change of molecular forms of structure. Man and animals become old simply because the normal molecular forms of structure, as well as physical contour, or figure, are changed, or lost. And old age is not considered a "poison," simply because the changes of the molecular forms of structure are spread over a lifetime—come gradually, slowly, but none the less surely.

Other modes of force in chemical combinations of matter, influencing motion, or chemical changes, in both the interest of repair and decay, depend for being considered "poisons" solely on the velocity with which they influence motion.

Thus, prussic acid and the cyanide of potassium are considered among the "deadly" poisons, solely on account of the velocity, or rapidity, with which they retard, or arrest motion, or chemical changes in the molecular forms of structure. In this class are chloral and chloroform. Strychnia, on the other hand, is considered a "deadly" poison, solely on account of the rapidity with which motion, or chemical changes in the interest of waste, is promoted.

Happily, the greater number of remedial agents in use only influence motion in either, or both, the interests of repair and waste. A few change forms, as calomel, and from them people shrink, they cannot tell exactly why, but the reason, for calomel, is, changing molecular forms (salivation). Tartar emetic, Spanish flies, etc., change forms, and promote motion in the interest of waste, and are not popular remedies, and probably never will be, and are very likely to pass further out of use by the profession.

I think, therefore, that the results of empirical experience

alone, which, by the by, is the court of final resort in all vexed or unsettled therapeutic questions, aside from the philosophy of its operation, demonstrates that Veratrum Viride simply retards motion in the interest of waste, and eliminates dead matter, but does not change molecular forms of structure, when given in doses sufficient to produce vomiting, or vomiting, purging and sweating; and that, when indicated for these purposes, a teaspoonful, or even larger single doses, is safer; though, for that matter, either is safe enough, and better results are realized than from the same quantity in smaller doses, extended over more time.

P. S. It may be proper to state, that when Veratrum is given in a large dose, for the first time in a family, I never leave the house until the vomiting ceases. When the vomiting comes on, chairs are placed under the posts of the foot of the bed, pillows removed, and a basin held to receive the discharges, giving tepid water through a glass tube, or, in its absence, a straw. I deem this due the patient; and though it looks distressing to bystanders, patients rarely complain about it after the sick stomach ceases. The relief quite compensates for the apparent distress.

ARTICLE V.—*A Day amongst the Surgeons of Philadelphia.* By JNO. E. OWENS, M.D., Chicago.

Through the kindness and courtesy of some of the most eminent surgeons of the Quaker City, I have been enabled to see very much that is interesting and profitable. I send you a few jottings of what has passed under my notice, hoping they may find a place amongst the valuable pages of the JOURNAL.

Prof. Pancoast gave me the particulars of a case of rhinoplasty, in which his son included, in the flap taken from the forehead, periosteum sufficient to produce new bone for the nose. I was sorry not to have seen this case, but it was impossible, as the patient had left the city. Prof. Pancoast's rule in this operation is to make the new nose one-third thicker and longer than the normal size. He applies, at the proper time, a gutta percha mould, with which, and a stuffing of cotton upon the inside of the new nose,

he succeeds in giving this lump of flesh a shape. This mode of including the periosteum in the flap for the nose, originated in Berlin, with Langenbeck, who is a master in the art of plastic surgery, and who has taught us the full value that is attached to the preservation of the periosteum in bony resections. I believe, however, that, at present, Langenbeck does not look so favorably upon the periosteal transplantation method in rhinoplasty. Prof. Agnew, who has experimented considerably with periosteum, says that the new bone is deposited in nodules, and that even these do not always occur.

Professor Agnew was good enough to show me a pair of forceps which he had devised for the removal of large uterine polypi. The instrument is strong, and composed of a male and female blade, which may be introduced after the manner of the obstetrical forceps—one blade at a time. A lever of the third kind, attached to one handle, and passing through the second, is worked with the disengaged hand, after the instrument has been applied to the pedicle; and thus moving one toothed blade over the other, the tumor is chewed off. Of course there is no hæmorrhage. I saw him also use skin plaster or prepared peritoneum of the bullock for closing the eyelids after extraction of cataract. He has used this organic substance in the ligation of several large arteries, cutting off the ends of the organic ligature close to the vessel, and closing the wound over it. The result was satisfactory. This skin plaster may be ordered of Tiemann & Co.

Prof. Gross being absent in Baltimore, his son, Dr. S. W. Gross, conducted the college clinic. Delayed union of fractured radius was the first case presented. This was treated with the ivory pegs—Dieffenbach's method. Silicate of Potash was recommended as an immovable dressing in suitable cases, and used in this one. It is certainly an elegant substitute for plaster of Paris, or starch, and may be most conveniently applied with an ordinary paint brush. The second was a case of hydrocele, in which the following procedure was recommended: With an ordinary sharp-pointed bistoury, puncture the tumor in order to drain off the fluid, and, about a week subsequently, operate for the radical cure by injection. At the end of this time Dr. Gross teaches that the superficies of the vaginal tunic having very much decreased, a smaller surface is presented for inflammation at

the time of the injection. Such a precaution may well be taken when the sack is very large, or when violent inflammation can be anticipated; but, in general, this preliminary is unnecessary, as the injection of strong Tr. Iodinii is sufficient. There is always an abundance of diseases of the urinary organs at the college. In the treatment of stricture of the urethra, rupture has become quite common; and the result of this method, so far as I have been able to learn, has been very gratifying. Richardson's, Voillemier's and Holt's dilators have been used for this purpose. A case of No. 4 stricture at the bulbous urethra was ruptured with Richardson's instrument, and immediately a No. 18 steel bougie was passed. The rents in the stricture are filled up by new tissue, and new mucous membrane is produced at the points of rupture. During the reparative process, of course dilatation by the passage of bougies is persevered in. A more lasting result is claimed for this than for any other method. In the next case of stricture, every justifiable effort was made to pass an instrument, but without success. The canal was irregular and tortuous; the urine dribbled away; there was hypertrophy and induration of the penis; œdema of the prepuce; the perineum was swelled, and deformed by scars; fistulous openings discharged urine, and here and there pus; the landmarks of the perineum were effaced. In such cases, tapping the membranous portion of the urethra is practiced. The knife is introduced not far from the verge of the anus, the only guide being the finger in the rectum. This relieves the parts, in front, from irritation, and frequently in a short time the improvement is such that an instrument may be passed.

I am very much indebted to Dr. Maury for the pains he took to show me two cases of ectropion vesicæ, upon which he had operated some time previous to my visit. Dr. Maury has immensely improved the condition of these patients in the following manner: The redundant folds of skin in the groin, covering hernial protrusions, and extending towards the perineum, were made available by carrying an incision across the perineum, making the extremities of the former look towards the tuberas ischiorum. This flap was marked out sufficiently large to oblige the operator to crowd it over and around the cleft in the abdomen. It was dissected up with its base at the lower margin of the cleft, and turned over the latter, like the leaf of a book, so that its

cutaneous surface was presented to the ectropion. The upper edge of this flap, thus applied, was inserted beneath the integument above the cleft, and the edges were united by numerous points of suture. When the dissection of this large square flap reached the penis, the latter was liberated by a semi-lunar incision, and permitted to fall through the flap, and remain below it.

One other point. The penis, in these cases, is frequently placed so high that the urine very readily escapes over the sides of the cleft. In order to obviate this as much as possible, as it would certainly interfere more or less with the union of the flap, the doctor drew down the penis, and fixed it with a ligature. The cicatrical contraction had, to a great extent, forced back the hernial protrusions which, perhaps, always exist. In one case the cleft is perfectly closed. Of course there is no power of retaining urine, and the patients wear a rubber urinal with comfort. In the second case a small opening still exists, which can be very readily closed.

Dr. Maury will probably publish these cases, with illustrations, in "The Photographic Review." This is a new bi-monthly, illustrative of interesting cases, with notes. This novel addition to medical literature will prove welcome, as the superiority of photography to other means, for illustrating disease, has been very fully tested. The co-operation of the different gentlemen connected with the large hospitals has been secured, and material will be supplied in abundance. I have received the first issue (October, 1870), containing very excellent photographs of Multilocular Hydatid Tumor of the Leg, with notes by Prof. Gross; of Meningocele, with notes by Prof. Agnew; of Horny Tumors of the Face, with notes by W. H. Pancoast, M.D.; and of Keloid Tumors in the negro, under the care of F. F. Maury, M.D. At the end of the year the six numbers may be bound together, forming a handsome volume. This journal is well worth six dollars, the price of subscription, which may be sent to J. B. Lippincott & Co., Philadelphia.

Dr. Maury also had the kindness to present me with the report (reprinted from the "American Journal of the Medical Sciences," April, 1870,) of a case of stricture of the œsophagus, in which he performed gastrotomy. I copy the principal points from the report.

In May, 1868, the patient, aged 25, was suddenly seized with choking sensations and violent vomiting. Such paroxysms soon became of daily occurrence, and the saliva upon being swallowed shortly afterwards rose to the mouth. Deglutition at times was readily performed for several successive days. Again, for prolonged periods, not a morsel of food could be retained for more than a few moments. The diet consisted of broths, soups, and an occasional glass of wine. He began to emaciate and lose strength, and sought advice in July, 1868. Upon exploration with a gum-elastic bougie, somewhat below the medium size, a diminution in the calibre of the œsophagus was readily detected near its cardiac orifice; but at no subsequent period could even a small instrument be made to pass the stricture. No history of cancer in his family, and no irritating substance had been swallowed. There was a feeling of constriction and suffocation upon the injection of food. No pain at the seat of stricture. The patient acknowledged having had, at the age of seventeen years, an indurated chancre and buboes, which were followed by a papular eruption. The strength was sustained as much as possible, and hydrarg., bichloride, and potas. iod.,were exhibited. After Jan. 1st, 1869, the tortures under which the patient had been laboring were aggravated; emaciation had become extreme; in the early part of April prostration confined him to his bed. He was as helpless as a child. Agonizing pains in the extremities, but more especially along the superficial surface of the tibiæ, now supervening, deprived him of rest both night and day. At the end of three weeks, he began to rally, and, after persevering efforts, to swallow small quantities of liquid. Having gained sufficient strength to leave his bed, he even went into the open air for short walks. About the middle of May he could no longer swallow anything. Resort was now had to enemata (brandy, beef extract, and milk punch,) upon which he subsisted for six weeks. The patient now earnestly importuned for an operation, but at this time, yielding to the earnest solicitations of the patient was considered unjustifiable. He continued to sink. The fast failing strength was sustained by enemata, and the pains controlled by morphia. Unsatisfied hunger caused the greatest distress. Finally, after consultation, it was decided to open the stomach. June 25th, 4 P. M. The patient, under the influence of chloroform, was

placed upon his back, the left side being somewhat elevated by means of folded blankets. A curvilinear incision, the convexity presenting towards the median line, was commenced at the external extremity of the seventh intercostal space, and carried downwards and outwards for nearly four inches, exposing the sheath of the rectus muscle, which was slit upon a groved director. The fibres of the rectus were next separated, partly with the fingers, partly with the scalpel, the cutting edge of the latter being used as little as possible, with the view of avoiding hæmorrhage. The posterior lamella of the sheath of the rectus, the transversalis fascia and the peritoneum were next successively divided on a director, when the stomach was seen projecting below the margin of the liver. It (stomach) was firmly grasped by the forceps, and a curved needle, armed with a silver wire, was passed through its anterior wall, in the direction of the vertical line of the body, the points of entry and exit of the body being about an inch and a quarter apart. Two other needles, armed in the same manner, were then passed from left to right, and made to cross the first at right angles, the wires including that part of the stomach to be opened—a point about two inches to the left of the pylorus. The first wire was then withdrawn, and, by means of a pair of scissors, the stomach was opened in a perpendicular direction to the extent of an inch. The wires previously passed were thus exposed, and, by dividing them, the two sutures were converted into four. There was no escape of fluid into the peritoneal cavity. The viscus was now attached to the edges of the opening in the abdominal walls by numerous silver sutures. A tube, with a single flange, such as is employed when establishing gastric fistule in dogs, was inserted into the stomach, the flange resting upon the edges of the external wound and secured by tapes. The wound through the abdominal parietes was then closed by ordinary sutures. Two hours later the patient began to sink, and at six o'clock, the following morning, died. Post mortem nine hours after death. Body much emaciated; small intestines and stomach contracted and empty; peritoneum perfectly smooth and uninjected; all the internal viscera normal; no enlargement of lymphatic glands. A dense, firm stricture of the œsophagus was observed just within its cardiac orifice. The stricture produced such complete obliteration of the calibre of the œsophagus as scarcely to admit of the passage of a

probe. A microscopical examination of its substance, made by Drs. Pepper and Tyson, gave no evidence as to its nature except that it probably was not cancerous.*

I need scarcely tell you that the faculties of the hospitals and colleges here have expressed themselves as adverse to conducting clinical instruction in the presence of students of both sexes. I cannot give you the views of the profession here, in a more condensed form, than is contained in the following "Remonstrance against clinical instruction being given to classes composed of both sexes," and signed by the faculties of the University of Pennsylvania, Jefferson Medical College, the Pennsylvania, Philadelphia, Episcopal, Wills, St. Joseph's, St. Mary's, the German, Children's, Charity, and Howard Hospitals; by the Northern and Philadelphia Dispensaries; and by the physicians at large of the city of Philadelphia:

"I. Clinical instruction in practical medicine demands an examination of all the organs and parts of the body, as far as practicable; hence, personal exposure becomes for this purpose often a matter of absolute necessity. It cannot be assumed, by any right-minded person, that male patients should be subjected to inspection before a class of females, although this inspection may, without impropriety, be submitted to before those of their own sex. A thorough investigation, as well as demonstration, in these cases—so necessary to render instruction complete and effective—is, by a mixed audience, precluded; while the clinical lecturer is restrained and embarrassed in his inquiries, and must, therefore, fall short in the conclusions which he may draw, and in the instruction which he communicates.

"II. In many operations upon male patients, exposure of the body is inevitable, and demonstrations must be made which are unfitted for the observation of students of the opposite sex. These expositions, when made under the eye of such a conjoined assemblage, are shocking to the sense of decency, and entail the risk of unmanning the surgeon—of distracting his mind, and endangering the life of his patient. Besides this, a large class of surgical diseases of the male is of so delicate a nature as altogether to forbid inspection by female students. Yet a complete understanding of this particular class of diseases is of pre-eminent importance to the community. Moreover, such affections can be thoroughly studied only in the clinics of the large cities, and the opportunity

* This is the first operation of gastrotomy for the obstruction of the œsophagus in this country, and the tenth on record. All the cases died within a few hours, except one, which lived twelve days.

for studying them, so far from being curtailed, should be extended to the utmost possible degree. To those who are familiar with such cases as are here alluded to, it is inconceivable that females should ever be called to their treatment.

"III. By the joint participation, on the part of male and female students, in the instruction and in the demonstrations which properly belong to the clinical lecture room, the barrier of respect is broken down, and that high estimation of womanly qualities, which should always be sustained and cherished, and which has its origin in domestic and social associations, is lost, by an inevitable and positive demoralization of the individuals concerned, thereby entailing most serious detriment to the morals of society."

ARTICLE VI.—*Prof. Beale and his Doctrines.* By I. N. DANFORTH, M.D., Chicago.

No account of the rise and progress of cell doctrines, however meagre, can be considered complete which does not embrace a review of the labors and views of Prof. Lionel S. Beale, of London. It is, I think, perfectly safe to affirm, that Prof. Beale is the most accomplished microscopist living; and as this is an era of skillful microscopists, it is probably equally safe to say, that no other microscopist has ever equaled him—not even excepting Quekett and Goodsir. He is peculiarly expert in the delicate manipulations necessary to the satisfactory, or at least profitable, use of the microscope; and well he may be, for his skill is the outgrowth of long years of such devoted labor as can only be expected of an ardent enthusiast, who is fully impressed with the belief that he has "work to do in the world."

Prof. Beale has also greatly extended our knowledge as to modes of preparing tissues for examination with high powers, staining tissues, making fine injections, and successfully preserving the most delicate textures for long periods of time. He has made a very patient, laborious, careful, and, I may add, highly successful, study of the use of the highest powers, and their adaptability to investigations upon all classes of healthy and morbid tissues. Indeed, he may be regarded as the true originator of high powers, as the term is understood at the present day.

Up to the year 1860, the sixteenth-inch objective was the highest power in use, and its employment was necessarily restricted to a very few of the more expert microscopists. In 1859, Dr. Beale desired Messrs. Powell & Lealand to attempt the construction of a glass "with a magnifying power double that of the sixteenth," and this they succeeded in producing the following year; it being the "first twenty-sixth ever made." Its magnifying power is 1800 diameters, and its value as a "working glass" was found by Prof. Beale to be very great. Encouraged by his success, he again applied to Powell & Lealand to manufacture an objective of still greater power; and, in 1864, in the month of October, they completed a fiftieth-of-an-inch objective, with an amplifying power of 3,000 diameters. Those who are practically conversant with the use of the microscope, will at once understand the difficulties which had to be overcome in the production of this "wonderful glass," as Dr. Beale so justly calls it. They will also call to mind the exquisite delicacy of manipulation requisite for the successful preparation of specimens to be examined therewith. Concerning its qualities as a "working glass," Dr. Beale says, "it defines quite as well as the twenty-fifth, and there is no difficulty in obtaining plenty of light for the illumination of the objects." (How to Work with the Microscope, page 286.)

Until the ice was thus broken by Beale, it was supposed to be practically impossible to use objectives of such immense power, on account of the presumed impossibility of focussing, and of obtaining illumination and defining power; and it is a somewhat unaccountable and very mortifying fact, that the pioneer in this most praiseworthy movement, was immediately assailed and ridiculed by several of his cotemporaries, in London and elsewhere, for attempting to accomplish that which could *not* be accomplished. Such extremely high powers, however, are never likely to come into very general use, both on account of their very great expense, and the extreme difficulty of working with them.

But Dr. Beale has conferred an infinitely greater service on the world of microscopists, by the introduction of a very simple and equally efficient manner of preparing tissues for examination. This method consists, essentially, in saturating the specimens with the purest and strongest glycerine, to which has been added a

small proportion of acetic acid; and in describing the details of the process, so clearly and intelligibly, that the merest tyro can prepare and preserve his own specimens. After a somewhat extended experience in the preparation and study of the tissues, by Dr. Beale's method, I am quite convinced that it is much superior to any other with which I am acquainted.

The carefully-written and elegantly-illustrated works of Prof. Beale are not so generally sought as they should be; two of them, however, namely, "How to Work with the Microscope," and "The Microscope in Practical Medicine," have met with quite an extensive sale in this country and abroad. But his "Archives," "Kidney Diseases," and other works, are not so generally found in the libraries of physicians. All of these works are beautifully and profusely illustrated. In the hands of their author, the art of making drawings of microscopic appearances has assumed a new phase entirely.

Having thus cursorily glanced at what Dr. Beale has accomplished for microscopy as a branch of medical science, we are now prepared to examine his peculiar views regarding the cell and its functions.

In the first place, it is but just to state, that Dr. Beale's theories are not the expression of a mere *hobby;* nor have they been constructed with the intention of bolstering up any preconceived notions regarding the nature of vitality or its origin. When he first commenced his remarkable microscopical studies and observations, he had no theories peculiarly his own. His present views, therefore, are but the legitimate and necessary outgrowth of his laborious and persistent observations upon the tissues, at all stages, both of their development and their disintegration.

At the very outstart, we find that Beale practically repudiates the old notion of the "type cell," which was looked upon as "an extremely monotonous structure," (Virchow), consisting essentially of *cell wall, contained fluid, granules, and nucleus.* According to the old theory, the cell wall was considered not only a very *important* part of the cell, but the part which maintained the nearest and truest relations with vitality. According to Beale, the cell wall is not only unimportant, but very often absent; and, when present, is merely the result of secondary changes, occurring upon the surface of the cell. "All that is essential to the cell, or

elementary part, is *matter that is in the living state—germinal matter*, and matter that *has been in the living state—formed material.*" (Protoplasm, page 55.)

In studying Dr. Beale's views, it will be most convenient to take up successively the so-called "nucleus," or germinal matter, and the surrounding cell-contents, or "formed material."

First—the nucleus. Prof. Beale believes that the nucleus is the only portion of the cell which is in the "living state;" it is the true ultimate repository of vital power, and therefore, practically, the ultimate anatomical living element. This body is always and everywhere easily distinguishable from the older, non-living portions of the cell—the so-called "formed material"—by its property of being readily stained by an ammoniacal solution of carmine. This discovery was announced by Prof. Beale several years since, and it has since been abundantly confirmed by a multitude of observers in different parts of the world. Indeed, it is now quite generally recognized by microscopists as a reliable test for the purpose of distinguishing the nucleus, or "germinal matter," from the proper cell-contents, or "formed material." The relative size of the nucleus depends upon the age of the cell, and the accessibility of nutrient material. In young cells, situated quite near their source of pabulum, as the lower stratum of epithelial or epidermic cells, the amount of germinal or living matter is very large, forming, at the *commencement* of their development, their *only* constituent. As they approach the surface, and recede from their source of nutrition, the "germinal matter" decreases, while the "formed material" increases. The same rule holds good in all varieties of cell growth, whether healthy or morbid—whether animal or vegetable. In his earlier lectures on the structure and growth of the tissues, (Archives of Medicine, vol. II,) Prof. Beale states, that this germinal matter is "granular" in its structure; in his recent publications, he states that it is "*clear*, *transparent*, *structureless*, *formless*," (Protoplasm, p. 48.) This apparent change of opinion is to be accounted for by the fact that Dr. Beale has recently very greatly increased his powers of observation, by the acquisition of the fiftieth-of-an-inch objective already alluded to.

According to the views which I have attempted to explain, the nucleus or germinal matter is the essential part of the cell; it

is the mysterious seat of vitality — the repository of life, the ultimate, indivisible, anatomical element. All vital actions, of whatever nature, depend upon the forces lodged within this simple and very minute body. Assimilation, secretion, locomotion, reproduction and thought depend, directly or indirectly, upon the exercise of the powers locked up in this infinitesimal speck of living matter. Its power of growth is practically without limit. So long as the germinal matter is supplied with a sufficient amount of appropriate pabulum, it grows and subdivides indefinitely. Each subdivision of germinal matter—each little mass which is thrown off from the parent mass, is endowed with all the powers and capabilities of the parent mass; thus each centre of growth, or nucleus, *may*—and if favorably situated and adequately nourished, *does* become, the source of very many new centres of growth. Very recently, Prof. Beale has conferred upon the germinal matter the name of "*Bioplasm*" as a substitute for the word "*Protoplasm*," which is already loaded down with more theories than it can conveniently carry. Regarding the use of this word, Dr. Beale says: "The term I propose to apply to the *living* or *germinal self-propagating* matter of living beings, and to restrict to this, is *Bioplasm*. Now that the word *Biology* has come into common use, it seems desirable to employ the same root in speaking of the matter which it is the main purpose of biology to investigate. *Bioplasm* involves no theory as regards the nature or the origin of the matter. It simply distinguishes it as *living*. A living white-blood corpuscle is a mass of *bioplasm*, or it might be termed a *bioplast*. A very minute living particle is a bioplast, and we may speak of living matter as bioplasmic substance." ("Disease Germs," page 12.)

Secondly: the "formed material." Formed material constitutes all that part of the cell which *is not* stained by the action of the carmine solution; and it is a remarkable fact, that, although the carmine fluid must necessarily *pass through* the formed material, in order to come in contact with the germinal matter, the former does not become tinted thereby. But formed material is not by any means limited to the proper "cell contents," (periplastic substance of Huxley.) The so-called intercellular substance, which finds its most perfect type in cartilage, is also formed material; while the cartilage cells are chiefly composed of

bioplasm, or living matter, from whence is derived the newly-formed "material" for the repair of cartilage. The same rule holds good as regards every other tissue; every muscle, every bone, every ligament, every gland, consists largely of "formed material," but at the same time we find myriads of minute masses of germinal matter, which are constantly assimilating new pabulum, constantly growing, constantly dividing, and constantly being converted into "formed material," to supply the place of that which is being worn out and converted into effete matter. Thus every atom of nutrient matter is converted first into germinal matter, (living matter, bioplasm) and next into formed material. Following this doctrine out to its practical application, we find that mucus is the *formed material* of the mucous corpuscle, the bile the *formed material* of the hepatic cell, the muscular fibril the *formed material* of the muscle cell, and the ultimate nerve fibre the *formed material* of the nerve cell. In other words, it is the proper function of "germinal matter" to convert pabulum first into other "germinal matter" like itself, and then into tissue like that of which it forms an integral part. That which was yesterday lifeless pabulum, is to-day living "germinal matter;" that which to-day is germinal matter, will to-morrow be formed material. As the formed material is increased at the expense of the germinal matter, the latter must of course decrease in exact proportion to the increase of the former; in other words, just *as* fast as *living* germinal matter decreases, just *so* fast does *non-living* formed material increase. Thus the formed material is made to subserve the purpose of a protective coating or envelope to the living matter or germ, shielding it from the destructive influences of heat, cold and moisture, until it shall, perchance, reach its appropriate *nidus* for future growth and development. This fact is peculiarly illustrated in the ovum of the tape worm, which after various vicissitudes and exposures, at last finds itself favorably situated for manifesting the developmental powers which have, for a longer or shorter time, been in a state of latent vitality.

Prof. Beale holds that the formed material is non-living matter; that it has, to all intents and purposes, ceased to live; but his test of vitality is the presence or absence of the *power of germination or reproduction.* This idea is very clearly expressed in Beale's

edition of Todd and Bowman's Physiology, Part I, page 12, namely, "the *entire cell* or elementary part is not alive. The inner (germinal) matter is living—the outer formed matter has ceased to live. The inner matter alone is capable of growth, of germination. It may, therefore, be called living or germinal matter, in contradistinction to the passive formed matter which envelops it." Again, he says, "the difference between germinal or living matter and the pabulum which nourishes it, on the one hand, and the formed material which is produced by it on the other, is, I believe, absolute. * * * * The ultimate particles of matter pass from the lifeless into the living state and from the latter into the dead state suddenly. Matter cannot be said to *half live* or *half die*. It is either *dead* or *living*, *animate* or *inanimate;* and formed matter has ceased to live." ("Protoplasm, or Life, Matter and Mind," page 36.) I think the great majority of histologists will find themselves compelled to dissent from this conclusion, if the term *dead* is to be used in its ordinary acceptation. It is simply equivalent to saying that a large proportion of every tissue and organ of the human body has ceased to live. For my own part, while I cannot claim that the mucus, or the bile, or the hair, or the free extremities of the nails, or the outer layer of the epidermis, consist of living matter, I certainly cannot admit that the muscular substance of my heart, or the nerve fibrils which convey external impressions to my sensorium, or the delicate membrane which lines my blood vessels, and in great part forms the capillaries of my body, are, either or any of them, composed essentially of dead matter. I do not think Dr. Beale means, or would claim this. It is much more probable that he intends to use the term "dead" in an arbitrary, technical sense, and as a convenient way of expressing the difference in developmental power between germinal matter and formed material. Nor do I think it quite just to conclude that, because one portion of a muscle can no longer assimilate nutrient matter and produce other material like itself, it has therefore ceased to live. Would it not be just *as* correct to say that an octogenarian, in whom the procreative power had passed away, had therefore ceased to live? If the presence or absence of the power of reproduction is really the test of the presence or absence of life, is not the conclusion as fair and as logical in the one case as in the other? The term "dead," "non-

living" or "lifeless" matter, as applied to formed material or the non-germinal portion of the solid tissues, is, it seems to me, a most unfortunate one. It can scarcely do otherwise than mislead very many of those, at least, who are commencing their medical studies, while it will be very apt to confuse and pester those who are more acccustomed to groping their way among the pitfalls of medicine. Let any practiced observer prepare a specimen of frog's muscle, and properly stain it with carmine, and then carefully examine it with a fifth or eighth-inch objective; he will find himself forced to the conclusion that if *only* the minute masses of "germinal matter" are *living*, the frog must have a wonderful capacity for jumping by the aid of dead muscles. We need not value Prof. Beale's microscopic observations any the less, however, merely because some of the conclusions which he draws from them are not quite acceptable.

Prof. Beale is a vigorous and outspoken opponent of the doctrine—at the present time so loudly trumpeted—of that small, but rather select school of "advanced thinkers" in England, who are assiduously laboring to place vital force and chemical force on the same level. Within the past few years, this species of heresy has taken a new lease of life, and clothed itself in new apparel. "Protoplasm," in assuming to be the "physical basis of life," has attempted to eject vitality, *per se*, from the organic world: "spontaneous generation" is re-enacting the old farce, under the auspices of new and not less skillful performers; but, from whatever stand-point vital force has been assailed, it has found in Prof. Beale a steady, unflinching and able advocate. On this subject, the writings of Dr. Beale are models of controversial labor. In conclusion, the essence of the doctrines of Beale may be briefly summarized in the following manner:

First: the *germinal matter*, nucleus, bioplasm, (endoplast of Huxley) is the essential, potential, vital and active portion of the cell; it is the ultimate repository of vitality, and wherever a mass of germinal matter exists, however minute it may be, or whatever form it may assume, *there* a cell exists, for the germinal matter is, practically, the cell.

Secondly: the *formed material*, cell contents, (periplast of Huxley) is matter which has resulted from changes incident to the death of the germinal matter; when the latter dies it becomes

formed material; all formed material *was* germinal matter; all germinal matter *will be* formed material. Formed material is chiefly concerned in the *function* of the tissue or organ whereof it forms a part; while germinal matter is chiefly if not exclusively concerned in reproduction and repair. And the distinction between these two forms of matter seems to be absolute; the dividing line is always sharply drawn; there is no neutral ground between them; or, as Dr. Beale expresses it, "matter cannot be said to *half live* or *half die*."

Thirdly: the chemical and physical views of life (to which I have already alluded) are utterly insufficient to account for the phenomena of life, or indeed any one of them; "spontaneous generation" is likewise equally baseless and without substantial proof. On this latter point, the following passage is sufficiently explicit: "it must then be regarded as a fact that living beings spring from pre-existing living beings, and that there is no such thing as spontaneous generation." ("Protoplasm," page 75.) In this connection, it is proper and very gratifying to remark that Prof. Huxley, in his recent address before the "British Association,' takes the strongest possible ground against the doctrine of "spontaneous generation."

The doctrines of Beale, considered as a whole, have found favor with many, if not most, of our most thoughtful and laborious histologists; and whatever of error may or may *not* be contained in his theories concerning cell-action, he has certainly greatly advanced our knowledge of structure. Moreover, I think he is clearly entitled to the credit of having taught us, more than any other man, how to properly and profitably "work with the microscope," as an aid to diagnosis, and the practical study of pathology; and for this, if for nothing else, he deserves the thanks and gratitude, not of microscopists alone, but of the whole profession.

I have attempted in this article, and those which have preceded it, to give a somewhat complete, though necessarily very brief, history of the rise and progress of the more prominent cell doctrines up to the present time. In doing this, I have already disclaimed, and hereby distinctly disclaim any title to originality, either of thought or method; and I have tried to be somewhat careful in indicating the sources of my information. My only

object has been to place before the readers of the "Journal" information for which I had myself been seeking, and very much felt the need of, in the simplest and most concise manner. In future articles I purpose taking up some other topics, holding a near relation to cytology.

ARTICLE VII. — *Case of Irregular Innervation.* By WALTER HAY, M.D., of Chicago.

The following analysis of a curious case of irregular innervation is presented in order to elicit the criticism of experts in nervous pathology, with the view to determine, if possible, its correct diagnosis, and suggestions for its treatment:

B—— ——, No. 80 Centre avenue, a robust Irish girl, has always enjoyed excellent health, aside from the nervous malady about to be described, which has existed from her earliest recollection, during which time the history of the case has been unmarked by any incident indicative of the cause of the malady, since its initial point, which appears to have been a severe fall upon the head sustained at the age of eleven months. The excellence of her general health is abundantly demonstrated by her present robust appearance, and the absence of any perceptible disturbance of the functions of organic life.

The characteristic features of the case are as follows:

1st, and most prominent (to her) partial *anæsthesia*, with *formication* of the surface and extremities, of the left arm, muscular power nearly normal, although her grasp of an object is not perfectly secure when her attention is diverted from it.

2nd. Constant *clonic convulsions* of the flexor muscles of the right arm, with *diminished muscular power* (*partial paralysis.*)

These conditions are occasionally apparent in the lower extremities in a lesser degree than in the upper, but generally their innervation is but slightly disturbed.

3rd. Pupil of the left eye nearly normal, somewhat contracted, perhaps, though the apparent contraction may be merely relative.

4th. Pupil of the right eye widely dilated and but slightly sensible to light.

5th. Visual range of the right (or dilated) eye about three times as long as that of the left (contracted eye), that is to say, objects just visible to the left eye at the distance of one foot and a half, are perceptible to the right eye at the distance of a little more than four feet.

6th. Reflex irritability of the spinal centres excessive, manifested in the right, but absent in the left or anæsthetic arm. Thus, if while carrying an object, such as some culinary utensil, dish, plate, etc., she should chance to be touched or spoken to suddenly and unexpectedly, the object would immediately be jerked upward by the convulsive movements of the flexors of the right arm.

7th. The point of the tongue when protruded is very slightly deflected to the right.

Having become habituated to this peculiar condition of the nervous system, the patient had regarded it as a subject for vexation or merriment rather than of anxiety, until recently, when its aggravation threatens to interfere with the performance of her daily avocation, that of a cook.

The diagnosis of such a case is of course purely inferential, to be demonstrated only by autopsy. The diminished (and altered) sensibility of the left arm would seem to indicate lesion, involving the posterior roots of the brachial plexus of the left side, together with more or less derangement of the gray substance of the central mass and of the posterior cornua of the opposite or right side above the 4th cervical vertebra, the plane of exit of the plexus from the cord, by reason of the decussation of the conductors of sensitive impressions in the gray substance of the cord. The gray substance, however, can be but partially involved, as from the almost perfect integrity of the innervation of the lower extremities, most of the conductors of sensitive impressions must remain intact.

The location of the lesion in this division and in this region of the spinal axis accounts likewise for the increased reflex activity in the muscles of the right arm, as the source of irritation must necessarily be above the corpora pyramidalia, the point of decussation of the voluntary motor conductors. Moreover, the partial structural integrity of the antero-lateral columns and of the anterior cornua of gray substance is demonstrated by the persistence (although diminished) of voluntary control of the muscular apparatus of the affected member.

This great reflex activity, together with the absence of hyperæsthesia, demonstrate the integrity of the posterior columns of the cord. The next point to be considered is the divergence of the tongue to the right, for the causes of which we must look back to the origin of the hypoglossal nerve in the groove between the corpora pyramidalia and olivaria (Gray), or from the gray nucleus upon the floor of the medulla oblongata (4th ventricle ?) (Stilling), near the posterior median furrow. In the same region of the cord, likewise, we find the origin of the two roots of the fifth nerve to which we must look for the sources of the perverted innervation of the iris of the right eye. The apparent difference in sensibility of the two retinæ is probably rather apparent than real, the greater range of vision in the right eye being due rather to the larger number of visual rays permitted to impinge upon the retina by reason of the greater degree of dilatation of the pupil of that side.

The absence of paralysis forbids the supposition of any structural change in the conductors of volitional impressions. The morbid phenomena seem to classify themselves under the two heads, *i. e.* diminution of sensitive, increase of motor energy; from which the inference seems logical, that the former is centric, originating in structural lesion of the gray substance of the cord, while the latter is a reflex effect of (probably) the same cause.

ARTICLE VIII.—*Cases from the Surgical Clinic of Professor Moses Gunn, of Rush Medical College.* Reported by H. F. CHESBROUGH, M.D.

[Continued.]

X. P. P., a young lad of sixteen, who had been before the class many times during the previous year for treatment of hip-joint disease in the suppurative stage, came to the clinic on the first Saturday in October, for resection of the head of the femur. When the lad first came under observation, his hip was suppurating extensively. Still, as cod liver oil and iodide of potassium agreed with him—as his appetite remained good, and the boy was not losing ground, no operative procedure was deemed necessary.

But at last the patient evidently began to lose flesh and appetite, and to show signs of being overcome by the severity of the disease. Now hope of a cure by anchylosis was abandoned, and all reliance placed in an exsection as the only chance of saving the patient's life.

Dr. Freer was present, and assisted in the operation. When the joint had been laid bare by a T-shaped incision, and the capsule freely laid open, an assistant used the leg as a lever to force the head of the femur out of the acetabulum, and the bone fractured just below the lesser trochanter. This was considered a very unfortunate accident at the time, but on examining the fragment after it had been removed, it was found to be carious at the base of the lesser trochanter, as well as in the head and neck. The lamellar structure of the shaft was very thin and weak, which accounted for the ease with which it fractured.

The wound was dressed with a pledget of lint, washed out with a solution of carbolic acid, and moderate extension and counter-extension maintained. The case progressed favorably, and on Saturday, Nov. 12th, 1870, he again appeared in the clinic, walking readily with a crutch, and the wound entirely healed. Up to this time he had not been allowed to walk without a crutch. It is evident now that he will soon be able to walk with merely a cane, and that the operation has not only saved his life but also given him a very useful limb.

XI. On the evening before the "Fourth" (July, 1869), Mrs. M. and her husband had a little discussion while under the influence of mountain dew. The next morning she discovered that her left shoulder was lame and painful, and procured some liniment for it. After about nine weeks she concluded that the shoulder did not get well quite fast enough, and applied to the Dispensary for relief. She was told that her arm was dislocated, and to come again on Saturday. About three weeks after this, she put in an appearance on Saturday (Oct. —). After she had been fully anæsthetized, the adhesions which the head of the bone had formed with the tissues about it were first forcibly and thoroughly broken up. The arm was then raised up by the side of the head, and extension by two assistants was made, while Professor Gunn fixed the shoulder with both hands, and with the tips

of the fingers followed the head of the humerus as it retreated upward from the axilla. When the head of the bone was sufficiently elevated, he endeavored to maintain it in position, while the assistants, still keeping up extension, gradually swept the arm downward till it rested by the side of the body. The third effort was successful. The arm was then put in a sling, and bound up securely in its place by the roller bandage.

The woman has since been back to the College, and pronounces her arm as good as ever.

XII. December 18, 1869, brought another case of downward dislocation of the right humerus. This case was of six weeks standing. The patient was treated in a similar manner, and at the first trial (the dislocation being much more recent) the luxation was reduced.

The arm was fixed by a roller, and worn in a sling, and was a perfectly serviceable member in a very few weeks.

Selections.

Suspension in Spinal Affections.—By Benjamin Lee, M.D., of Philadelphia. Read before the Medical Society of the State of Pennsylvania, June, 1870.

There is no single characteristic of the human form which more entirely commands our admiration, and more strikingly distinguishes it from those of the various families of the brute creation, than its erectness. So universally is this fact recognized, that it has been incorporated into our language. Considering an erect carriage and a well-poised head as an index, and hence a type, of a perfect physical organization, we, in common with the Germans, have carried the idea into the domain of ethics, and designate the individual who exhibits, in his dealing with his fellows, a healthy and undistorted moral nature, an *upright* man.

It is to the spinal column, and its mode of articulation with the pelvis and the head, that this noble peculiarity of our race is due. Any diseased action in either the essential or accessory constituents of this important organ must sooner or later result in the impairment of this distinguishing feature. Three deductions have

been made from this well-understood fact, which have been shared, at digerent times to varying degrees, by the medical profession and the general public.

1. That a loss of erectness of figure, as a rule, indicates spinal distortion, and hence diseased action in either the spine or its motor apparatus.

2. That the distortion is not only an indication, but an actual element, of the disease, directly tending to aggravate and perpetuate the morbid conditions; and hence,

3. That a restoration of the distorted spine to or towards its normal position is an important means of checking the destructive processes and restoring it also to a healthy state.

It is on this last proposition that the mechanical treatment of spinal distortions is rationally founded. Two methods of effecting the result which it contemplates early suggested themselves. They may be designated as the *method of counter-extension* and the *method of counter-pressure*,—the first being an effort to straighten out the curved spine by traction in the line of its axis, acting in opposite directions from its two extremities; the second to unbend the curve by forces applied at right angles to the line of its axis,—in one direction at its two extremities, and in the opposite direction against its point of greatest convexity. Both methods may be practically carried out in two ways: either by means of apparatus worn upon the person, indifferently called braces, supporters, assistants, splints, etc., which I shall designate as *spinal instruments*, or through the medium of apparatus acting from some fixed point of support outside of the person, which I shall call *spinal machines*. I have already, elsewhere,* assigned my reasons for believing that spinal instruments should be made only on the principle of counter-pressure. My object in the present essay is to indicate the perfect applicability of the principle of counter-extension to the construction of spinal machines, and to call attention to the rapid and admirable results attainable by its means.

I am well aware that for years past it has been the fashion for medical men to decry extension of the spine by machinery as unscientific and dangerous, those who write with special reference to these affections treating it with contemptuous ridicule, while systematic authors entirely ignore it. It has had powerful advocates, however, on both sides of the water. Among the more important in England may be mentioned Darwin,† Shaw,‡ and

* Transactions American Medical Association, 1866; and Contributions to the Pathology, Diagnosis, and Treatment of Angular Curvature of the Spine. Philadelphia, J. B. Lippincott & Co., 1867.

† Zoonomia, or the Laws of Organic Life. By Erasmus Darwin. Vol. iii, p. 140 *et seq.*

‡ Observations on the Causes and Early Symptoms of Defects in the Form of the Spine, Chest, and Shoulders. By John Shaw. London, 1827.

Sheldrake,* and, in this country, Kissam, of New York, and Prof. Mitchell,† of this city, the latter of whom, with that carelessness of purely theoretical criticism which characterized the man, was particularly enthusiastic in its support, and, I may add, as successful in its employment. A surgeon of many years' standing in the navy of the United States is a living monument to the admirable results which that physician obtained in cases of spinal caries.

The plan which he adopted was the seemingly rather severe one of suspension by the head in the erect posture, the weight of a portion of the trunk and of the lower extremities being the extending force. This differed altogether from that of Shaw, who placed his patient in a recumbent posture and applied traction at the head and pelvis, and, to a considerable extent, from those of Darwin and Sheldrake, who, though they relied upon the weight of the body for their force, had their patient supported upon an inclined plane. Nevertheless, the idea was not a new one with him, by any means; for we find Bampfield saying that "in the erect state of the body the spine can be stretched by swinging by the head or by the hands," and that, "if it be the intention to stretch the upper half of the spinal column, swinging by the head will more particularly effect it, whilst the weight of the lower extremities will also extend the lower vertebræ in some degree." The portion of the appliance which Dr. Mitchell used, which was claimed by him as his own idea, as I understand it, was the *go-cart* provided with the means of suspension, which had for its object the conjunction of locomotion with extension, and which he termed, appropriately enough, his "spine-car." It is to this plan of extension by partial or complete suspension in the vertical position, whether in the standing or sitting posture, that I desire for a few moments to call the attention of the society. And, first, I wish to point out certain weak points in the treatment of spinal caries by counter pressure, in which I consider that it is most advantageously supplemented by this method. Our avowed object in making use of antero-posterior force in a horizontal plane is to substitute the oblique articulating processes, in great measure, for the vertebral bodies at the seat of disease, as the axis of support for the weight of the head and trunk. Now, while it is true that these processes are of comparatively firm texture, and almost invariably free from disease, it is also certain that the constant endurance of a weight so much greater than that which nature intended them to bear must be attended, in time, with a certain amount of absorption of their tissue. Besides this, their opposing surfaces are so oblique that much of the weight will necessarily

* A Treatise on Diseased Spine and on Distorted Spine, with Cases to illustrate the Success of a New Method of Cure. London, 1816.

† North American Medical and Surgical Journal, No. 1, 1826.

fall upon their ligaments, which must become more or less relaxed, and thus permit the processes to slip by one another, distorting the articulation, and diminishing the height of the patient. This is one unfortunate result of this method. The other consists in the fact that we have no means of determining at what point in the column, intermediate between our opposing forces, either above or below the seat of the projection, the pressure applied against the spine in an anterior direction shall cease to exert its force. Theoretically, it should do so just where the abnormal projection meets the normal line of the column. But if there happen to be a weaker point than this, the force will be transmitted to that point, and we shall have an incurvation produced, which, when below the projection, assumes the very troublesome form known as *lordosis*. This is a second evil, which can neither be prevented nor corrected by apparatus worn upon the person. But I think it will be acknowledged that extension by suspension —taking off this destructively abnormal weight from the processes, and gently stretching out the consecutive curve—is admirably adapted to palliate, if not to entirely remove, these difficulties.

The degree of pressure, too, which we are compelled to make use of in redressing the curve is sometimes so great as to provoke a superficial abrasion of the cuticle. This is especially apt to be the case in warm weather. Under such circumstances, modified suspension furnishes an admirable substitute, for a sufficient length of time daily to give an opportunity for reparation of the surface. It is also especially adapted to caries in the cervical region, affording the patient the most complete and delightful relief from the agonizing pain or wearisome discomfort which the weight of the head gives rise to.

I present, for the inspection of the society, three different pieces of apparatus, or machines, in which this principle is applied. And, in order that you may the better appreciate the mode of application, and the entire ease with which they are used, some of my patients who have been treated in this manner have kindly consented to be present and allow me to demonstrate their action.

Case I.—The little patient whom I now introduce to you is seven years old, rather short of stature, as you see, but ruddy and well nourished, having the complete use of his limbs, walking freely, fearlessly, and naturally. When he first came under my care, five years since, he was completely paralyzed in the muscles of the lower extremities, and, to a great extent, in those of the trunk, as indicated by inability to move even the terminal phalanges of the toes, or to maintain the sitting posture. His condition was, in fact, altogether a critical one. The cervical portion of the spine being the seat of caries, and two vertebræ having

been, to a considerable extent, destroyed, the head was tilted back until the occiput rested on the shoulders, and so firmly that it was impossible to insert the finger beneath it, while the skin of this region was acquiring that moist, mucoid character often noticed when cutaneous surfaces are kept in constant apposition. He suffered from constant dyspnœa, respiration being to a great degree diaphragmatic; had frequent attacks of spasmodic gastralgia; was greatly emaciated; passed sleepless nights; and was, as may be imagined, excessively irritable, allowing his mother and nurse not a moment's ease. The application of a splint, provided with a head-piece for producing erection of the cervical spine by means of antero-posterior force, very soon relieved all his most pressing symptoms, but it was some months before he acquired sufficient muscular power in the legs to be able to move the toes. At this time my attention was called by Dr. S. Weir Mitchell, in consultation with whom I first saw the case, to his father's experiments and successes in the employment of suspension. Although greatly prejudiced against its use, I felt that at least no injury could ensue if it were employed with proper precautions, and determined to give it a fair trial, considering that a desperate case justified what I then viewed as a desperate remedy. I therefore had made for him this steel rod, bent at right angles and provided at its lower end, for a distance of about eight inches, as you see, with ratchet teeth on one side. The horizontal portion of this rod, carrying a steel bow, to which the chin and occipital strap could be attached, passes over the head, while the vertical serrated portion is received into a keeper screwed to the back of the little chair in which he ordinarily sat. The straps being adjusted to the head, I am enabled by means of a pinion-key introduced at the back of the keeper, to elevate the rod, and thus extend the cervical spine at will. Conscious of relief, from the complete removal of the weight of the head from the ulcerated and sensitive vertebræ, the little fellow, to my surprise, became at once reconciled to so singular a position, and even enjoyed it. The paralysis now began to diminish with notably increased rapidity, so that he was soon able to sit alone, and could move the legs slightly. With a view to give him an opportunity of exercising these reawakened muscles, and of associating amusement with the necessary confinement, I therefore had a little rocker constructed, upon which his chair could be fastened. This you now see before you. Placing him upon it, adjusting the straps, and making extension, you see how completely the head is supported, and yet with what freedom and fearlessness he rides, turning his head from side to side at pleasure, and bringing almost all the muscles of the trunk and lower extremities into active, though gentle, play. This amused him, and he often spent two or three hours a day upon it, with the effect of greatly increasing his mus-

cular power. He was still, however, unable to walk. In order to teach him to stand and to encourage the natural movements of the legs, I then had this car or perambulator constructed (simply the child's go-cart, formerly so much in vogue for infants learning to walk), with a keeper attached to it posteriorly to receive the ratchet-rod. In this he was at once able to stand up without risk of falling, and soon began to take steps. The paralysis being completely relieved, the general health restored, and the position of the head greatly improved, his mother's anxiety was now aroused with regard to that inevitable accompaniment of carious destruction of cervical vertebræ,—distortion of the thorax anteriorly, and projection of the lower end of the sternum, unquestionably a very unseemly and distressing phase of the deformity. To remedy this defect as far as possible, by bringing the pectoral and other muscles of the thorax into action at the same time that spinal extension was being carried on, I devised—partly in imitation of Dr. Mitchell, and partly acting on a hint contained in a little German work on the "Treatment of Deformities by Curative Gymnastics," by Dr. Nitzsche, director of the "Orthopædeon" at Dresden—the *spinal swing*, a specimen of which I have caused to be erected here for your inspection. The contrivance for the support of the head is the same as in the other machine, viz: the steel bow with the double strap for the chin and occiput, in which the head is exactly balanced. But the elevating apparatus is now entirely different. Instead of the ratchet-rod, we have a stout cord or rope, and in place of a key and spring as an extending force, the patient's own hands and strength of arm. It is not necessary to have a frame constructed like this before you. A pulley may be firmly attached to a joist in the ceiling or over a doorway; the former is preferable, as giving greater length of rope, and, therefore, more freedom and variety of motion. Over this pulley passes the rope. One end of it is firmly attached to the steel bow over the top of the head; the other hangs down in front of the patient's face, and is provided with two movable ovoid blocks, which, sliding on the rope, serve as handles. These are placed from three to five inches apart, according to the size of the patient, and retained in position by a knot under each. The lower one should be about on a level with the top of the patient's head. Now, it is evident that, the headstraps being applied, as soon as the patient makes traction upon the rope by means of the handles, the force is transmitted over the pulley directly to the head, which is thus drawn upward, and that the weight is equally shared by the head and the hands; so that, when the feet are raised from the floor, just one-half the patient's weight, less that of the head, is supported by the cervical spine. It is also plain that, when the disease is below the line of attachment of the arm to the trunk, the entire weight of the body below that point will

be our extending force. The apparatus being under the patient's control, however, it is optional with him what amount of force he shall make use of. In the case of children, it is oftener necessary to caution them against using too much than to urge them to use more. You see this little fellow gradually drawing himself up on his tip-toes, and now actually lifting his feet and allowing me to swing him back and forth, not only without pain, but with positive enjoyment. Under the use of this machine for from one to two hours a day, there has been a gradual amelioration of the thoracic distortion, the ribs assuming a more natural position, and the sternum falling more towards its normal inclination, while the general capacity of the chest has increased. A tendency to chronic and occasionally acute pulmonary catarrh, which more than once threatened to prove fatal, and which I was inclined to attribute in part, at least, to the compressed condition of the lungs, has also almost entirely disappeared.

Case II.—The young girl whom I now bring before you has been under my care since September last. She is seventeen years of age. Her parents are both living. The father suffers from chronic rheumatism, but I am not able to discover any history of strumous antecedents. About a year before her physician called me to see her, her health having been previously all that could be desired, she began to suffer from pain in the back. This increased steadily, and in about six weeks wandering pains began to develop themselves in the head, radiating from the temples. Before long she observed that, after sitting for any length of time, she became stiff and could walk only with considerable difficulty. So great was this rigidity on rising in the morning, that it took at least two hours for her muscles (the flexors of the thigh more particularly) to become sufficiently relaxed to enable her to walk with any comfort. She grew steadily worse all winter, and early the next summer was obliged to give up her trade, which was that of envelop-folding, in consequence of the frequent falls which she had when walking in the street. These falls were caused by a sudden spasmodic contraction of certain of the flexor muscles of the thigh (principally the psoas and pyriform, presumably) of the left side, accompanied by excruciating pain in the hip. This pain and spasm also often attacked her during sleep, causing her to wake with a scream. By this time the head-ache had become very severe, and was often attended by obstinate vomiting. When I first saw her it was almost constant, as well as the pain in the hip already referred to. She was much emaciated, without appetite, not able to stand erect, or to walk across the room unassisted. Her physician had run through the whole list of anodynes without succeeding in relieving the pains, and greatly to the disgust of her stomach. I felt not the slightest

doubt, from the symptoms, history, and attitude of the patient, that there was serious inflammatory, and probably ulcerative, disease going on in the spinal column; but it was impossible to discover its seat, no projection of a spinous process having yet taken place. From the absence of gastralgia, I concluded that it was below the dorsal region, and from the intense pain in the hip, that it was quite low in the lumbar region. I suggested to her physician that, the location of the diseased action not being positively indicated, it would be well to wait a short time before applying anything in the shape of a brace, and meanwhile to give what relief we could by the use of suspension. Accordingly, I caused a spinal swing to be put up directly over the couch on which she lay, and directed her to use it three times a day for ten minutes, gradually increasing the time as she became accustomed to it. This she did very rapidly, owing to the agreeable sensation of rest which the act of extension gave her. By the end of a week I was rejoiced to find her about free from pain, with no vomiting, and quite a creditable appetite. The rigidity of the limbs was diminishing, and she could walk with some ease. By the end of the third week, however, I felt confident that I could detect a slight bulging of the last lumbar vertebra, and at once ordered a splint to be made, to give support in that region. In a week from this time she walked to my office and back, a distance of half a mile, in order to have it applied. Her improvement was now so rapid that at the end of three months she resumed work for half a day, and for the past four or five months has been working her full time, although somewhat against my advice. During the winter she has once even ventured to go to a ball and indulge her terpsichorean tastes. Her menses, which were suspended for several months, returned soon after the application of the splint. She continues to use the swing, and, as you see, although quite heavy, is not afraid to bear her weight strongly upon the head-straps. She generally uses it, however, in the sitting posture, with weights attached, in order that she may be able to employ her hands. I do not need to say anything as to her present condition. Her firm, elastic step, rosy cheek, and bright eye, testify plainly enough what her general health is. Her treatment, I may add, has been purely mechanical, no internal remedies having been used.

Case III.—This lad, the last case which I shall detain you to see, is fourteen years old. I first saw him in November last. He was then lying about the house, good for nothing, pale and anæmic, and—having been obliged to give up going to school, in which he was much interested—very despondent. He complained of headache, pain in the hips (running down one limb to the knee), morning rigidity, and exhaustion on walking a very short

distance, so that he could not go a square without stopping to sit down to rest. In this case, also, not a trace of posterior deviation existed; but upon causing him to stoop forward, a slight yielding towards the left appeared in the upper part of the lumbar region. Profiting by my experience in the last case, which was just then beginning to feel the benefit of the brace, I determined to give him support at once,—not emulating the caution of the practitioner of whom I recently heard, who, when consulted in a case of suspected spinal disease, gravely informed the anxious mother that it might be necessary to wait two years before it could be determined whether such were the case or not. A spinal swing was put up for him the next day, and so rapid was his improvement that in a week he was able to walk to my office, a full half mile to have his splint applied. In three months he was at school again, and has recently obtained my permission to play base-ball. He also, as you see, has no fear of hanging, if allowed to be his own executioner. This case is one of the deepest interest, from the gratifying fact that not a particle of deformity has made its appearance. I hold that the success of the treatment fully substantiates the correctness of the diagnosis, and that this boy is another living witness to the truth of the principle for which I have long contended—that inflammation of the spinal column is perfectly recognizable before it has reached the stage of caries and deformity, which evils may therefore, under favoring circumstances, be entirely averted. That it requires no education as a specialist to make the diagnosis in such cases, is sufficiently proven by the fact that the physician in whose practice these two very interesting cases occurred had, in both instances, become reasonably well convinced of the true nature of the disease before soliciting my assistance.

This mode of treatment is equally applicable to lateral curvature. In the incipiency of that affection, indeed, it may unaided be adequate to work a cure. By causing the patient habitually to take hold of the higher handle with the hand corresponding to the depressed shoulder, that shoulder is thus, for the time being, elevated, and its muscles thrown into more powerful action than those of the opposite side, while the curve of the spinal column, if not too rigid, is entirely reversed, and, under any circumstances, diminished.

The advantages of the mechanical treatment in such affections, judiciously combining the use of instruments and machines, over that which consists in confinement to the horizontal posture and the establishment of exhausting purulent discharges, are incalculable. While it is, to say the very least, *as* successful in preventing and controlling deformity, it affords to constitutions which so pressingly demand them, those sovereign tonics, *exercise* and the *open air.—Med. Times.*

Editor's Book Table.

[NOTE. — All works reviewed in the columns of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN & COOKE, whose catalogue of Medical Books will be sent to any address upon request.]

A Handbook of Medical Microscopy. By Joseph G. Richardson, M.D., Microscopist to the Pennsylvania Hospital, etc., etc. Philadelphia: J. B. Lippincott & Co.

This little treatise supplies a vacuum in American medical literature, long felt by those members of the profession who have devoted any attention to the subject of microscopic investigation.

The literature of the microscope has been hitherto almost exclusively European, but imperfectly adapted to the medical microscopist, by reason of the extent of the field attempted to be embraced, and still more imperfectly to American students, while the costliness of most of the works has placed them outside of the reach of many earnest workers, who are compelled to study, amongst others, the "bread and butter sciences."

Without meaning to depreciate the unquestionably great value of the works of Carpenter, Beale, Hogg, Gosse and others, they certainly fail to supply exactly the need of the tyro in medical microscopy, who is compelled in acquiring them, in order to get a little that he does want, to purchase much that he does not want, has no use for, and which will only serve to distract his attention from the field, already sufficiently wide, of his legitimate inquiry.

We have examined the little volume of Dr. Richardson with much care, and find it to be comprehensive as regards its subject matter, concise in style, and explicit in statement. Having traveled the road leading to practical microscopy when it was only a by-path with no landmarks to guide our doubtful and devious way, we are in a position to appreciate fully the value of the instructions laid down by the author, and the great advantage to be derived from their careful study by those desirous of following in the same path.

The author seems to understand that the physician needs to become in the shortest possible time familiar with the practical application of the microscope to medical diagnosis, and hence, does not compel him to wade through voluminous treatises upon history, optics, mathematics, geology, or palæontology. He don't once in the whole book say "diatom," that hobby of the dilletanti and bore of utilitarians.

While we must confess a sneaking sympathy with his weakness for high powers, we fear that the majority are against us.

The author is a staunch advocate, indeed the ablest in this country, of Cohnheim's theory of the amæboid movements of white blood cells (leucocytes) and of their essential relation to the inflammatory process, and was the first to direct attention to the "Identity of the white corpuscles of the blood with the salivary mucus and pus corpuscles." The demonstration of this identity should entitle him to the gratitude of every doubter who, like the writer, may have for years been puzzled to detect any difference between them by which they could be distinguished from each other.

But enough has been said of the character and scope of a work which we believe will do more to facilitate the studies of medical microscopists than any within our knowledge, and, as such, we give it our most hearty commendation. W. H.

The Pathology and Treatment of Venereal Diseases: including the Results of Recent Investigations upon the Subject. By FREEMAN J. BUMSTEAD, M.D., Professor of Venereal Diseases at the College of Physicians and Surgeons, New York, etc., etc. Third Edition, Revised and Enlarged. With Illustrations. Pp. 704. Philadelphia: Henry C. Lea, 1870.

When the first edition of this work appeared, we wrote of it in terms of high commendation. The present edition shows very careful and industrious revision, many parts having been entirely re-written, portions, formerly controversial but now settled, having been omitted, the text in some instances condensed, and the bulk of the entire work increased sixty-four pages. The modifications prominently to be noticed refer to the treatment of stricture, and

the operations of ruptures and internal urethrotomy, chancroid and syphilis, visceral syphilis, and syphilitic affections of the eyes. The latter topic has been delegated especially to Dr. E. G. Loring, whom Dr. Bumstead vouches for as unexcelled and rarely equalled in his specialty. We do not hesitate to rank this book as the best on the subject. It is in our opinion the most correct in doctrine as it is certainly the most practical in its teachings. It is "up to the times"—devoid of obscurity, direct in its methods, and reliable in its therapeutics. Physicians who see but little of venereal disease, should have this work for their enlightenment, and those who see much of it will infallibly find suggestions for daily assistance.

Practical Anatomy: a Manual of Dissections. By Christopher Heath, F. R. C. S., Lecturer on Anatomy at the Westminster Hospital, etc., etc. First American from the Second English Edition. Edited, with Additions, by William W. Keen, M.D., Lecturer on Pathological Anatomy in the Jefferson Medical College, etc., etc. Pp. 572. Philadelphia: Henry C. Lea, 1870.

The teacher of Practical Anatomy will find this volume of very great assistance, as it comes nearer to what is wanted when the subject is on the table, than any one of the numerous manuals for the dissecting room it has been our fortune to meet. All of them have savored too much of mere descriptive anatomy. This is really a help to him who is beginning to practice upon the cadaver. It is well illustrated by numerous woodcuts and diagrams, and the text excellently well sets forth exactly what the student is to do and look for at each step of his investigations. The American editor has modified the arrangement of the text so as to have it accord more with the methods adopted in this country. He has also incorporated the results of recent important researches—particularly those of Duchenne, Cleland and Luschka; and almost entirely re-written the directions for dissection of the eye.

The name of the American editor has not previously, to our personal knowledge, been attached to any volume as author or editor, but is familiar to us and many of our readers, as a contri-

butor of many interesting and valuable articles to our valued quarterly contemporary, the *Am. Jour. of Med. Sciences.* In his present task he has developed the possession of abilities, both as an author and editor, which we hope hereafter to see employed still further for the benefit of the profession.

A Treatise on Physiology and Hygiene, for Educational Institutions and General Readers. Fully Illustrated. By Joseph C. Hutchison, M.D., President of the N. Y. Path. Soc., Vice-Pres. of the N. Y. Acad. of Med., Surgeon to the Brooklyn City Hospital, late Pres. of the Med. Soc. of the State of N. Y., etc., etc. New York: Clark & Maynard, Publishers, 5 Barclay Street, 1870. From the Publishers, by S. C. Griggs & Co. $1.60. Pp. 270.

The eminent position of the author of this treatise entitles it to notice, although avowedly compiled for popular use. For this purpose we can freely commend it to teachers as being reliable, and as complete as, perhaps, is necessary to the non-professional student. It is perspicuously written—divided into paragraphs with full-faced captions, and at the foot of each page a series of questions to facilitate the work of the teacher. It occurs to us that more illustrations should have been introduced to assist comprehension of the text.

Pamphlets.

Portraits of Diseases of the Skin.

Messrs. Lindsay & Blakiston send us Part I of A Descriptive Catalogue of the New Sydenham Society's Atlas of Portraits of Diseases of the Skin. Compiled at the request of the Council, by Jonathan Hutchinson, F. R. C. S., etc., etc. They announce that they are now prepared to receive subscriptions for the publications of the New Sydenham Society for the year 1870, at ten dollars, payable in currency, and invariably in advance, and to furnish any of the previous years at the same rate and on the same

terms. The practical character and permanent value of these publications, and the very low price at which they are furnished, commend them to the favorable attention of the medical profession in the United States.

Forty-four volumes were published during the eleven years up to, and including, 1869.

The works to be published in 1870 are Trousseau's Clinical Medicine, vol. iii; Stricker's Manual of Histology, vol. i; Niemeyer on Phthisis; Wunderlich's Treatise on the Use of the Thermometer in Disease; and A Tenth Fasciculus of the Atlas of Skin Diseases.

Subscribers at a distance can have their volumes mailed to them, postage paid, as they appear, by remitting $1.50 in addition to the subscription price for the year.

Non-subscribers can obtain the books published during any one year by subscribing and paying for that year $10, but no volumes or books can be had otherwise or separately except the following: The Year Books for 1859, '60, '61, and 62, for $10.50; Portraits of Skin Diseases, Fasciculi 1 to 9, for $42. A Descriptive Catalogue of the Society's Atlas of Portraits of Diseases of the Skin, and their last Report, will be furnished gratis upon application.

From the same Publishers, by Cobb Brothers, 81 and 83 Lake Street, we receive the

Physician's Visiting List for 1870.

This visiting list is the simplest, and by many physicians preferred to any other form published. It is too well known, having now been before the profession for twenty years, to require description. The extended circulation it has achieved enables the publishers the present year to make a material reduction in its price. For convenience of our readers we give the sizes and prices at which copies can be obtained by addressing the publishers, or any of the principal booksellers. Mailed post-paid on receipt of price.

For 25 Patients weekly, tucks, pockets and pencil, $1; for 50 Patients weekly, tucks, pockets and pencil, $1.25; for 75 Patients weekly, tucks, pockets and pencil, $1.50; for 100 Patients weekly, tucks, pockets and pencil, $2; for 50 Patients weekly, 2 vols. Jan. to June, July to Dec., tucks, pock-

ets and pencil, $2.50; for 100 Patients weekly, 2 vols. Jan. to June, July to Dec., tucks, pockets and pencil, $3; for 25 Patients weekly, interleaved, tucks, pockets and pencil, $1.50; for 50 Patients weekly, interleaved, tucks, pockets and pencil, $1.75; for 50 Patients weekly, interleaved, 2 vols. Jan. to June, July to Dec., tucks, pockets and pencil, $3.

Photographic Review of Medicine and Surgery. A Bi-Monthly Illustration of Interesting Cases, accompanied by Notes; edited by F. F. MAURY, M.D., and L. A. DUHRING, M.D. No. 1, Vol. 1, October, 1870. Contents: Multilocular Hydatid Tumor, S. D. Gross, M.D.; Meningocele, D. Hayes Agnew, M.D.; Horny Tumors, Wm. H. Pancoast, M.D.; Keloid Tumor, F. F. Maury, M.D. Published by J. B. Lippincott & Co., 715 and 717 Market Street, Philadelphia. $6 per annum, in advance.

From the Prospectus we extract:

The Photographic Review will appear in numbers, every other month, each containing four Photographic Plates, with appropriate notes and remarks. At the end of the year the six numbers may be bound together, forming a handsome volume.

We take pleasure in announcing that Drs. S. D. Gross, Joseph Pancoast, D. Hayes Agnew, R. J. Levis, A. Hewson, Wm. Hunt, J. H. Brinton, John H. Packard, Wm. Pepper, J. M. Da Costa, T. G. Morton, Wm. H. Pancoast, S. Weir Mitchell, S. W. Gross, Harrison Allen, J. Ashhurst, Jr., and other eminent members of the profession, are among the regular contributors.

The initial No. which is before us fully sustains the promise of the publishers. The enormous expense necessarily incurred in the production of the very elegant and striking photographs which accompany the descriptive text, must demand a large subscription list for its support. We sincerely trust the undertaking may meet with the success it eminently deserves. It is creditable in every way to the enterprising originators, and to the profession. The photographs alone are worth a dollar each.

Constitution and By-Laws of the Medical Library and Journal Association of New York, with List of Officers and Members. 1870.

Editorial.

Publishers' Notice.

Readers of the JOURNAL will not fail to recollect that this is tne last No. of the volume, and that continuance of their subscriptions necessitates payment in advance. Prompt remittance will enable us to determine the size of the edition to be published, and, if as general as we have every reason to expect, will permit liberal improvements in every department included. A glance at the general index of the volume, now complete, will show tl.e range and variety of topics noticed and discussed, and that few or none of the matters about which the profession have been thinking and writing are neglected. In the ensuing volume, space will be gained for greater attention to many practical subjects by condensation of our foreign department. The elaborate papers on physiological subjects, which have constituted an important feature of the present volume, whilst they have elicited the warmest interest of a goodly number of our readers, yet have detracted somewhat from the immediately practical character which we are desirous hereafter of impressing upon the JOURNAL. We must remit these elaborate investigations and discussions to the monographs, the quarterlies, and cyclopædias. The gist of the matters observed, discussed and discovered, will be given, and all reasonable latitude permitted to correspondents in their efforts to arrive at and develop medical truth. But the Editors have determined upon what they conclude best for the interests of both the JOURNAL and subscribers, to make it more than ever a thorough abstract and chronicle of the time—a necessity for each and every practicing physician who desires to keep pace with the steady, onward march of the profession.

On the part of the Publishers no care or expense will be spared to make its mechanical appearance creditable to themselves, and its prompt issue satisfactory to subscribers.

The Editors

Pledge to their readers, for the coming year, increased contributions of time and industry to the highest development of the important organ of the profession committed to their charge. An

enlarged corps of contributors has been secured, and every effort will be put forth to make the JOURNAL a welcome visitant to the tables of physicians, and a valuable assistant to them in solving the professional problems of their chosen work.

Palato-Pharyngeal Tumor.

In the November No. of the JOURNAL (p. 653), Dr. Chesbrough reports from the Surgical Clinic of Prof. Gunn, the removal of an extraordinary tumor from its attachment to the *velum pendulum palati*. So far as the standard books are concerned, the case is unique, and certainly the difficulties attending its removal can scarcely be exaggerated in description. The fortunate result may well be considered a surgical triumph.

In the *Southern Medical and Surgical Journal*, May, 1853, we find the report, by Dr. L. A. Dugas, of a case of fibrous tumor in the same locality, which he successfully extirpated.

Of this tumor, Dr. Dugas says: "The soft palate was carried forwards and downwards, so as to constitute a prominence the size of a large egg, to the posterior surface of which [the palate] the tumor was attached. Deglutition was so difficult that he could take no solid food, his articulation was very indistinct, and respiration considerably impeded when he would walk briskly, causing him to breathe loudly, and like a horse affected with the 'bellows.'"

The operation instituted by Dr. Dugas, however, was much more formidable than that described by Dr. Chesbrough as succeeding in Dr. Gunn's case. He says:

"Provided with actual cauteries, a syringe, sulphate of zinc, etc., to control the hemorrhage from the general surface and smaller vessels, I passed a ligature beneath the right carotid artery, and left it there, ready to be tied, should this become necessary. The patient was then seated in a chair, and an incision made from the right angle of the mouth to the masseter muscle, which necessitated the ligature of the facial artery. In the third stage of the operation, a longitudinal incision was made from the side of the uvula to the roof of the mouth, through the soft palate."

In this manner the tumor was removed from its attachments, the strong connective tissue being torn by the fingers. In Dr. Dugas' case there was also found a small supplementary tumor, apparently

in connection with, and pressing down, the right tonsil, which had not been discovered until after the removal of the larger tumor. This was also removed in a similar manner, although not without considerable difficulty. The patient fully recovered. Subsequent microscopic examination showed the tumors to be purely fibrous. We regard it as better to adopt the plan of Prof. Gunn, and have this examination made prior to the operation.

Free Advertisement.

CHICAGO, September 30, 1870.

J. L. SMITH, Esq.—DEAR SIR: From a careful examination of the "Home Bitters," and the formula from which they are manufactured, we have no hesitation in saying they are a most excellent tonic, and we are satisfied they are equal, if not superior, to any bitters yet offered to the public. Yours respectfully,

R. LUDLAM, M.D., 297 Wabash Ave.,
Prof. of Obstetrics and Diseases of Women and Children, and Dean of Faculty, Hahnemann Medical College.

TEMPLE S. HOYNE, A.M., M.D., 711 Wabash Ave.,
Prof. of Materia Medica and Therapeutics, Hahnemann Medical College.

And our friend Mariner, "Analytical Chemist," etc., certifies that the "bitters" are in general use by the medical profession—in this preparation presented in pure alcoholic solution. As the reporters say, "comment is unnecessary."

Freedom of Opinion.

It is perhaps unnecessary for us again to announce that we do not hold ourselves responsible for the opinions of our correspondents. Truth is not a mere matter of opinion, and there is a world of sense in the old observation that men rarely come at a reasonable opinion on any subject until they have first exhausted all the absurd views it is possible to take of it. All we ask is, that our correspondents shall have intelligent notions, and advance them in good faith.

DOCTOR LYMAN STANTON, of Copenhagen, N. Y., tells the following good story—true, and to the point: "A gentleman who had just lost a member of his family under the treatment of poisons, said to his physician, 'This is the last doctor's bill that I shall ever pay; I shall never employ a doctor again so long as I live and have my senses.' The doctor replied, 'Drowning men catch at straws, and you may yet be glad to see the doctor.' The gentleman replied, '*No, never!* I shall trust in *God Almighty* and *catnip tea.*'"—*Eclectic Review.*

Medical Items, News, and Gossip.

E. M., a clerk in a public office, came for advice, complaining of excessive flow of urine, with great thirst, voracious appetite, and gradual emaciation. Sp. grav. of urine ranging from 1.030 to 1.040. Various medication, meat diet, etc., were adopted, with never more than temporary relief. On careful inquiry as to the surroundings, it was ascertained that, in the intervals of duty (delivering of letters at the post office window), he was in the habit of stepping back from the opening, and leaning against the tubes of the steam heating apparatus, whereby the back was strongly heated. This habit had been kept up for several months, the weather having been unusually cold. Discontinuance of the practice was enjoined, and perfect recovery ensued, without any further medication or change of diet. The writer, who attended the case, thinks that if he had taken the patient out of the office, and had exhibited some particular medicine, the latter would have had the credit of the cure. There has been no return of the disease, although about seven years have elapsed.——Several of our friends complain of the uncertain action of that usually mild laxative, the citrate of magnesia. It is often inefficient, and often excessively irritant. It varies in its chemical composition, as ordinarily put up in solution, and is both inconvenient and expensive for country use. Ten or twelve years since, our attention was called to this matter by some writer, we think in the *Am. Jour. of Pharmacy*, and we were led to substitute for the citrate of magnesia, the tartrate of soda, which is fully as efficient as the former, even when properly prepared; not liable to decomposition, cheaper, and readily presented in an equally agreeable and palatable solution. It may be extemporaneously given in water, with lemon syrup, or, if desired, a little citric acid may be added. This salt is preferable to the double tartrate of soda and potash in most cases when the latter is employed.——When creasote is indicated in dyspeptic cases, an old and useful addition is Sp. Ammon. Aromat., 15 or 20 drops of the latter to one or two of the former, in an ounce of water. It is better without the syrup usually added.——Trousseau commended as a substitute for cod liver oil, for daily use, four ounces of fresh butter, with three-fourths of a grain

of iodide of potassium, three grains of the bromide of potassium, and half a drachm of salt, to be eaten on bread. The medicines, in that butter, would scarcely hurt much, at least in these days, when drachm doses of the bromide are considered "quite the thing." ——The Prussian government has already ordered 200,000 wooden legs.——At Painesville, Ohio, a man lying sick with typhoid fever, was instantly killed by the shock of the recent great explosion of nitro-glycerin, although two miles distant from the point where it occurred. A physician twelve miles distant was stunned by the concussion, his horse brought to a standstill, and his watch stopped in his pocket. The *Scientific American* calls for stringent legislation to prohibit the general use of this fearfully potent and destructive agent.——Houzeau has contrived an apparatus, by aid of which he is able to prepare ozone in any quantity from the air or oxygen. He has not yet given a description of his invention, although publishing the general result of his observation. Considering the intense activity of this great atmospheric purifier, such an invention is attended with much general and practical interest.——At the Children's Hospital of Lausanne, M. Joel treats extensive burns by placing the patient, for fifteen or twenty minutes at a time, in a bath containing a couple of handsfull of sulphate of iron. This is repeated twice a day, and is said to moderate the suppuration, remove the fetid odor, and promote rapid recovery.——The papers say, that the drugging of drinks, whereby the operations of the *chevaliers d'industrie* of our cities are facilitated, is accomplished simply by putting tobacco snuff in the beverage. We are inclined to think that the principal agent in most of these cases is alcohol. ——The *Pacific Journal* advises, for fetid expectoration: ℞ Acid. Carbol., gr. xl; Aq., ℥viij; M.; give a tablespoonful every two or three hours. Or, ℞ Creasoti, gtt. xx; Acid. Sulph. Aromat., ʒ j; Aq., ℥ viij; M.; give in the same way. Or, ℞ Potassæ Permang., gr. viij; Aq., ℥ viij; M.; same directions. The last prescription is reputed to be much the best.——The *Oregon Reporter* states, that turpentine is an antidote for phosphorus. "Let all remember this when a child accidentally helps itself to matches."——Chloride of potassium is recommended by Dr. Sanders as a substitute for the bromide.——Epistaxis is said to be controlled by pressure of a branch of the facial artery, near

the ala of the nostril whence the blood is flowing. A slight intermittent movement of the soft parts may be seen or felt by careful observation. So writes a correspondent of the *Gazette des Hopitaux.*——A case of simultaneous intra and extra uterine pregnancy was reported to the Washtenaw (Mich.) Co. Med. Soc. by Prof. Sager. The pathological specimen was forwarded to him by Dr. H. B. Landon, of Bay City. There was a fœtus in the uterine cavity, and its twin in the left Fallopian tube.——A correspondent gives the following as the original VELPEAU'S MIXTURE: ℞ Tinct. Opii, Tinct. Camph. Co., Tinct. Rhei, āā ʒ j; Ess. Menth. Pip., ʒ x; Tinct. Capsici, ʒ vj; M. Dr. Squibb's notorious compound (prescribed in New York city as Tinct. Opii Comp.) is an imitation of this, and from the similarity of the name given it to that by which paregoric is often known, is certainly sufficiently dangerous.——The New York State Inebriate Asylum, at Binghampton, is now under the charge of Dr. Daniel E. Dodge, who may be addressed for information.——The process of skin grafting over extensively denuded and granulating surfaces, suggested as a new method in the Parisian, is essentially a revival of an old practice.——A paper on the Effects of Increased Atmospheric Pressure, by Dr. E. A. Clark, of St. Louis, was accidentally mislaid, but will receive further notice in an ensuing No.

New Polyscope.

M. Trouve's new polyscope serves for a laryngoscope, ophthalmoscope, otoscope, and urethroscope, and represents, when closed, a case seven inches long by one inch and a quarter in diameter. The two parts composing it carry each a lens at their opposite extremities—the one two and a half inches, and the other three and a half. In the lids which close the case, two mirrors are placed, the one plane, the other concave, both being pierced in the centre. The case contains—1. Two larynx mirrors with handle. 2. Three ear speculums. 3. A photophor, or candlestick, with three branches, terminating on the side of the light by a vent, which at the same time does for a reflector; the photophor can ascend to the height of fifteen and three-quarter inches.

Loot.

Value of Public Urinals.

The sanitary committee of the Rochdale corporation have recently erected a public urinal, so constructed as to collect the product, which is extensively used for scouring cotton cloth. The cost was £161, and £8 8s. has been received as rental for the year. This, however, is greatly below the value, the ascertained product being upwards of 20,000 gallons a year. The committee anticipate, in future, a good income from these constructions.—*Lancet.*

Born on the 4th day of July, A. D. 1870, 5 minutes before 12 o'clock, M., in the village of Colon, St. Joseph Co., Mich., a female child, with the left fore-arm amputated, the stump healed by cicatrix; daughter of Margaret Bradley, wife of Nelson N. Bradley. Nathan Mitchell, M.D., Accoucheur.

Vaccination in the Italian Army.

Dr. Baroffio, in his report on vaccination in the Italian army in 1868, reports that the number vaccinated was about 57,000. The good effects of vaccination and revaccination are constantly becoming more apparent. The mortality from small pox in the Sardinian army, which formerly was nearly 7 per cent., in 1863 had fallen to 4 per cent., and in 1868 was little more than 3½. Dr. Baroffio expresses a favorable opinion of the plan of taking the lymph from healthy and strong infants, and then transmitting it from arm to arm among the soldiers.—*Brit. Med. Jour.*

Application for Cancer.

An Italian medical journal recommends the following application for cancer of the breast: Concentrated acetic acid, 15 parts; creasote, 3¾ parts; water 450 parts. A case is mentioned, in which a cancer was removed and cicatrization completed in six weeks. The application was made on lint, four or five times daily. —*Dental Times.*

Dr. S. H. Bennett recommends the following in the nausea and vomiting of phthisis:

℞ Naphthæ Medicinalis, - - - - f. ℥ i;
Tinct. Cardamoni Comp., - - - - f. ℥ ;
Mist. Camphoræ, - - - - - f. ℥ vii.
M. Ft. Mist.
Sig.—A tablespoonful every four hours.

Small Pox in Paris.

The number of deaths in Paris from small pox is daily increasing. From the 17th to the 23rd April there were 132 deaths, and 166 from the 24th to the 30th. These results are surprising, in view of the great number of revaccinations which have taken place within four or five months past. The documents presented to the Academy by M. Vernois would lead one to impute the numerous cases of unsuccessful revaccination to vaccine taken from the animal, and to find, in this fact, the principal reason for the growing increase of the actual epidemic. It is, therefore, more urgent than ever to return to the vaccine of Jenner.—*Lyons Medical.*

Temperature in Scarlatina.

Dr. E. L. Fox, in some admirable clinical observations on the temperature of disease, says: "We must give a guarded prognosis in cases of scarlatina with very high temperature, but unfavorable cases are not always marked by extreme elevation of the mercury. Death will be ushered in by a high temperature, if it occurs during the eruptive period of the disease, but even then the thermometer may fall just before the fatal event." He thinks that a high temperature will be found to precede death from complications, such as scarlatinal rheumatism, pneumonia, arachnitis, and nephritis, while a fatal termination dependent on septiæmia may be accompanied generally, but not always, by a lower temperature. The pulse bears little definite relation to the temperature in scarlatina. A rise of temperature often occurs during desquamation, but this is not always the case. Acute tubal nephritis, of which albuminuria and hæmaturia are the evidences, will cause a rise of temperature, even to the maximum point of the original disease.—*Medical Times and Gazette.*

Chinese Medication.

Ling Wau, a Celestial charlatan, has taken up his abode in New York, and advertises not only an imported materia medica of three hundred "remarkable Chinese medicines," but imported apothecaries to dispense them. In this connection it may be of interest to remark, that San Francisco custom-house authorities recently seized an invoice of "remarkable Chinese remedies," consisting of pickled monkeys, dried toads, and such like medicinal articles. An elegant Mongolian prescription might read:

℞ Pulv. unguis pollicis pedis, - - - - - - grs. v;
Bufonis exsiccati rasi, - - - - - - - ʒ j;
Caudæ soricis ustæ, q. s. ad gratum saporem.

Tritura bene, et in chartulis v. divide, quarum capiat æger unam bis in die.

—*Medical Gazette.*

The Slain in War.

What to do with the slain in the war, has occupied the attention of the *Gazette Hebdomadaire*, and we are glad to see that some of the writers are prepared to advocate burning as superior to burying. The ancient plan had many advantages from a sanitary point of view, and we should welcome any discussion which might tend to remove the objections of modern Europe to any mode of disposal of the dead that might be better for the living than that now practiced.—*Med. Press and Circular.*

Hair Dye.

Mr. McDonald communicates to the *Am. Jour. of Pharmacy*, this, as a "Brown Hair Dye:"

"To those whose consciences will permit them to recommend such preparations to their customers, I submit the following formula—

℞ Acetate of Lead, - - - - - ℥ ij;
Hyposulphite of Soda, - - - - ℥ j;
Rose (or other perfumed) Water, - - - ℥ xiv;
Glycerin, - - - - - f ℥ ij;

Dissolve the acetate of lead and hyposulphite of soda in separate portions of the perfumed water, filter separately, mix the solutions, and add the glycerin.

"In a short time after it is made, the solution will become slightly turbid. This may arise, either from a small quantity of air which is contained in the liquid, or, perhaps, from the presence of a small amount of oxalic acid with which glycerin is said to be sometimes contaminated. It, however, soon becomes clear by deposition of a minute quantity of dark powder (sulphuret of lead), and remains so, so long as the bottle is kept tightly corked. I think it is quite as harmless as the ordinary lead and sulphur dyes, but this is, at the best, only a left-handed recommendation."

Tincture of Erigeron in Alveolar Hæmorrhage.

Mr. Perkins states, (*Dental Cosmos*, Aug. 1870,) that the tincture of erigeron is more efficacious than Monsel's salt for arresting the troublesome hæmorrhage sometimes following extraction of teeth.

Small Pox in Russia.

In Russia, vaccination is not compulsory. According to official returns, 10,350,000 persons have died of small pox in that country during the last seventy years. What say our friends of the Anti-vaccination League to this?—*Lancet.*

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☞ N. B. By an unaccountable mistake, the numbers for April and May were paged alike. For convenience of reference, the duplicate paging for May in the Index will have affixed the italic *a*.

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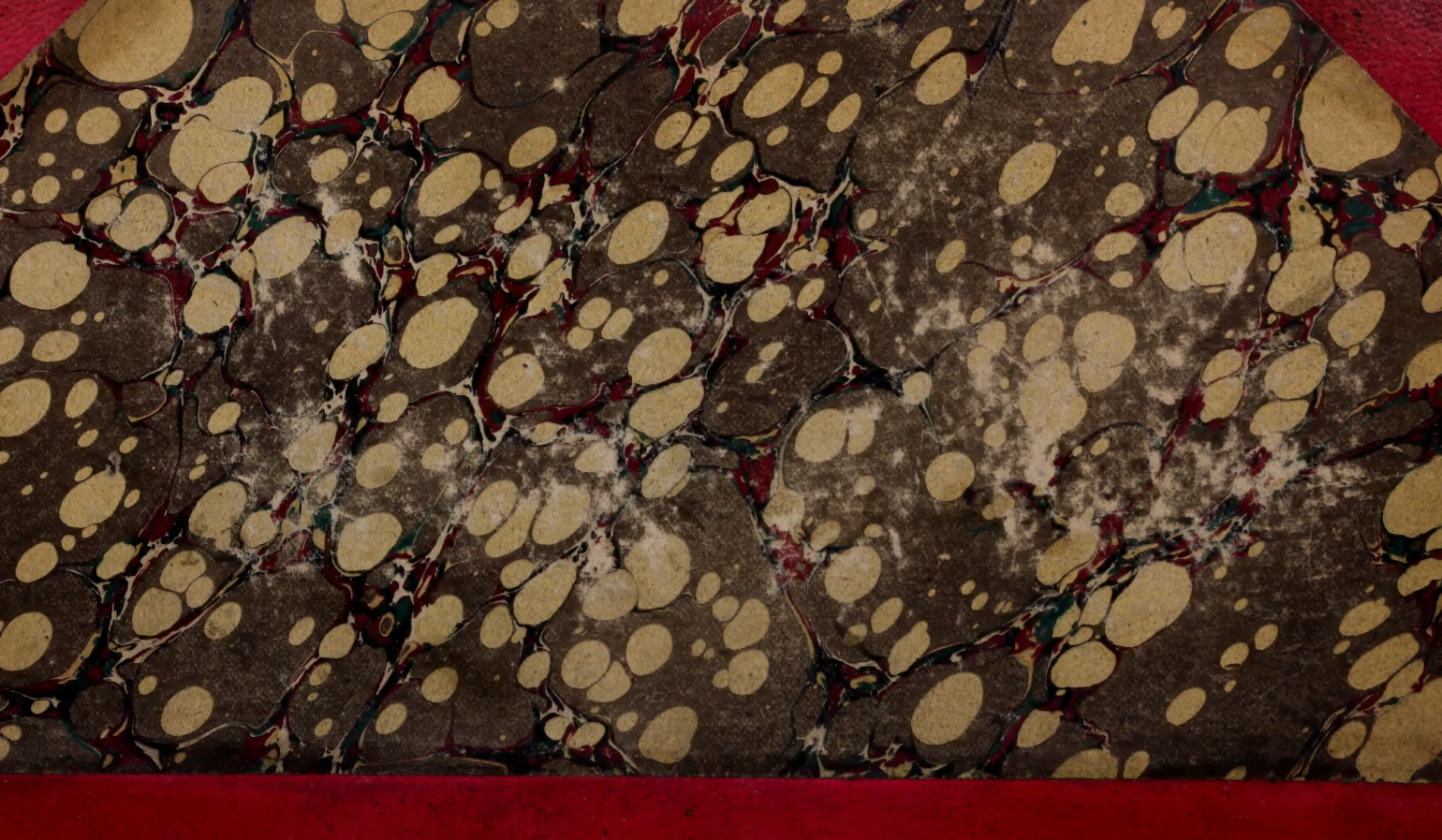
CORRESPONDENCE.

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